

School of Mining Engineering



UNIVERSITY OF THE
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JOHANNESBURG

**IMPACT OF THE MINING CHARTER ON SOCIO-ECONOMIC
DEVELOPMENT AND MINING INVESTMENT ATTRACTIVENESS IN
SOUTH AFRICA**

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A research report submitted to the Faculty of Engineering and the Built Environment,
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requirements for the degree of Master of Science in Engineering.

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DECLARATION

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ABSTRACT

The purpose of this study was to review the impact of the Mining Charter on socio-economic development and mining investment attractiveness in South Africa. The impact on socio-economic development was assessed by reviewing government compliance reports and Minerals Council of South Africa publications. The analysis of exploration budgets as a percentage of country Gross Domestic Product (GDP) was used to gauge the investment attractiveness of South Africa's mining industry. A qualitative description was also conducted on mining codes and mineral policies of Canada, Australia, Brazil, Chile and five African countries (Ghana, Botswana, Tanzania, DRC, Zambia) to understand how these countries utilise natural resources to advance socio-economic developments. The study concluded that the Mining Charter has a positive impact on socio-economic development in South Africa. The research further revealed that globally, South Africa ranks relatively low in its exploration expenditure in terms of both absolute exploration budget and percentage of exploration budget to GDP. Findings of the international benchmarking study are that the requirements of elements of the Mining Charter are similar to other socio-economic development interventions observed in the assessed mining jurisdictions. The requirement of ownership of mining companies by local people is restricted to South Africa and the DRC. In Canada there is limited sharing-holding/profit-sharing for the benefit of the community where there is an agreement in place between the mining company and such community. These agreements are not imposed by law or mining policy. The research finding regarding the ownership element is significant in that it links to the problem statement of the research study wherein the requirement of ownership of mining companies by citizens ("black people") is reportedly one of the main hindrances of mining investments in South Africa, as singled out by some of the

mining executives. The recommendation from the study is that the South African Government should enforce empowerment deals where all shareholders are treated equally in terms of contributions and participation in the managing of a mining company. In line with other mining jurisdictions particularly in Africa, direct state participation could be considered as an option for meaningful economic participation of the South African Government, for the benefit of all South Africans.

DEDICATION

To my family!

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LIST OF ABBREVIATIONS

ANC	African National Congress
B-BBEE	Broad-Based Black Economic Empowerment
BEE	Black Economic Empowerment
CSR	Corporate Social Responsibility
DME	Department of Minerals and Energy
DMR	Department of Mineral Resources
DRC	Democratic Republic of Congo
EE	Employment Equity
EMP	Environmental Management Plan
ESD	Enterprise and Supplier Development
ESOP's	Employee Share Ownership Plans
EXCO	Executive Committee
GDP	Gross Domestic Products
GFCF	Gross Fixed Capital Formation
HDP	Historically Disadvantaged Persons
HDSA	Historically Disadvantaged South Africans
HRD	Human Resource Development
IAI	Investment Attractive Index
IBA	Impact and Benefit Agreement
MCSA	Minerals Council South Africa
MDF	Mineral Development Fund
MIGDETT	Mining Industry Growth, Development and Employment Task Team
MMDA	Mines and Minerals Development Act, No 11 of 2015 (MMDA)
MPRDA	Mineral and Petroleum Resources Development Act
R&D	Research and Development
SLP	Social and Labour Plans
STEM	Science, Technology, Engineering and Mathematics

1 INTRODUCTION

1.1 Chapter Overview

Chapter 1 introduces the research study by stating the purpose of the research and discussing the research background. The research motivation is then explained followed by discussions on the problem statement. The chapter concludes with highlighting the structure of the research report.

1.2 Purpose of the Study

The purpose of this study was to review the impact of the Mining Charter on socio-economic development and mining investment attractiveness in South Africa. The impact on socio-economic development was assessed by reviewing government compliance reports and Minerals Council of South Africa (MCSA) publications. Exploration budgets were analysed to assess the mining investment climate in South Africa and globally. The study was concluded with an assessment of mining codes and mineral policies of Australia, Canada, Chile, Brazil and five African mining jurisdictions including Ghana, Botswana, Tanzania, Democratic Republic of Congo (DRC) and Zambia. The purpose of this assessment was to understand how the said jurisdictions utilise natural resources to advance socio-economic development.

1.3 Research Background

Post-colonisation, many sub-Saharan countries enacted new mineral policies that focused on structural changes. For South Africa, the demise of colonisation saw the birth of apartheid in 1948. Apartheid was a system applied by the white minority ruling government to segregate the population based on race. During apartheid, the land in

South Africa was generally categorised into five types; private, state, alienated state, proclaimed and trust land. For each land type, there was a unique procedure in which surface and mineral rights were acquired (Cawood & Minnit, 1998).

It was only in 1994 that the first democratic general elections were held in South Africa. This first democratic election saw the African National Congress (ANC) political party come into power when it won a majority of the votes. The victory meant amongst other things, an inheritance of a complex system of mineral rights ownership. The change in political leadership and introduction of a new parliament led to the promulgation of a new Constitution of South Africa ("the Constitution") and associated new policies.

Section 25 (4) (a) of the Constitution alludes to the nation's (South Africa) commitment to reforms that will bring about equitable access to all South Africa's natural resources (Republic of South Africa, 1996). With regard to mineral resources, the Minerals and Mining Policy for South Africa, 1998 was the resultant policy for the minerals sector. Following the adoption of this mineral policy, the mining sector in South Africa is now regulated by the Mineral and Petroleum Resources Development Act 28 of 2002 (MPRDA) (Cawood & Minnit, 1998). The intention of the MPRDA is to make provision for equitable access to and sustainable development of South Africa's mineral and petroleum resources (Republic of South Africa, 2002).

The MPRDA was informed by the ANC's Freedom Charter of 1955 which proclaimed that, as quoted by Cawood & Minnit (1998: p.374), "the people shall share in the country's wealth and that the mineral wealth beneath the soil... shall be transferred to the people as a whole". The revision of the mining codes post-1994 saw mineral resources vested in the custodianship of the state for the benefit of all South Africans.

Black Economic Empowerment (BEE) became the second most important proposal after the ownership of minerals debate (Cawood, 2004). BEE, now Broad-Based Black Economic Empowerment (B-BBEE) since 2003, is a South African Government strategy aimed at advancing economic transformation and enhancing the economic participation of black people in South Africa. The first draft of the B-BBEE Charter for the South African mining industry was released in 2002. This policy, as ruled by a High Court, is commonly referred to as the Mining Charter and aims to redress injustices of the past where black people, mining communities and women in South Africa were excluded from meaningful participation in the mining and petroleum industry. In terms of the B-BBEE Act, “black people” is a generic term which refers to Africans, Coloureds and Indians (Republic of South Africa, 2003) who are citizens of South Africa by birth or descent, or who became citizens of South Africa by naturalisation before 27 April 2004.

The first review of compliance with the Mining Charter was conducted in 2009 by the Department of Mineral Resources (DMR) in the form of the Mining Charter Impact Assessment Report (Department of Mineral Resources, 2009). The report indicated that good progress was made by mining companies with regard to compliance with Historically Disadvantaged South Africans (HDSA) participation in management. All other elements of the charter at the time were poorly complied with. The impact assessment report recommended that the 2004 Mining Charter needed to be reviewed and amended. This recommendation was followed through and led to the 2010 version of the Mining Charter. Five years into the implementation of the 2010 Mining Charter, the DMR instituted a second assessment to review the compliance to the charter. The assessment report was released during May 2015. The main conclusion of the

assessment was that the Mining Charter had been in existence for more than a decade, however, it was observed that there was still a long way for the sector to be fully transformed and compliant (Department of Mineral Resources, 2017).

The conclusions of the assessment prompted yet another review of the Mining Charter. In June 2017, the then Minister of Mineral Resources announced the revised 2017 Mining Charter. This revised 2017 charter was disputed by the MCSA. In its submissions to the court, the MCSA argued that there was a lack of consultation in the drafting of the 2017 Mining Charter by the government. The council further argued that the Mining Charter is not a law but a policy document. The MCSA also had a concern on the increased target of 26% to 30% for HDSA ownership. The MCSA further stated that the implementation of this revised 2017 charter would harm the industry by steering away investors. The MCSA asked the court to set aside the implementation of the 2017 Mining Charter (Omarjee, 2017).

The MPRDA uses regulations to set out terms and conditions for which a mineral right is granted. The DMR's defence position was that if transformation goals are not met, then there is a breach of a mineral right. The DMR argued that the breach of a mineral right triggers Section 47 of the MPRDA, which enables the minister to cancel such mineral right. In essence, the Mining Charter gives the effect of Section 100 (2) (a) of the MPRDA Act of 2002 and therefore it cannot be viewed as having any status in law (Omarjee, 2017). This Section 100 (2) (a) of the MPRDA empowers the mineral resources Minister to develop a broad-based socio-economic empowerment Charter that sets the framework, targets and time-table for effecting the entry of HDSA's into the mining industry, and allow such South Africans to benefit from the exploitation of such mineral resources (Republic of South Africa, 2002). Figure 1.1 depicts the link

between the Mining Charter and laws of South Africa and the ruling party's stance on the country's mineral wealth.

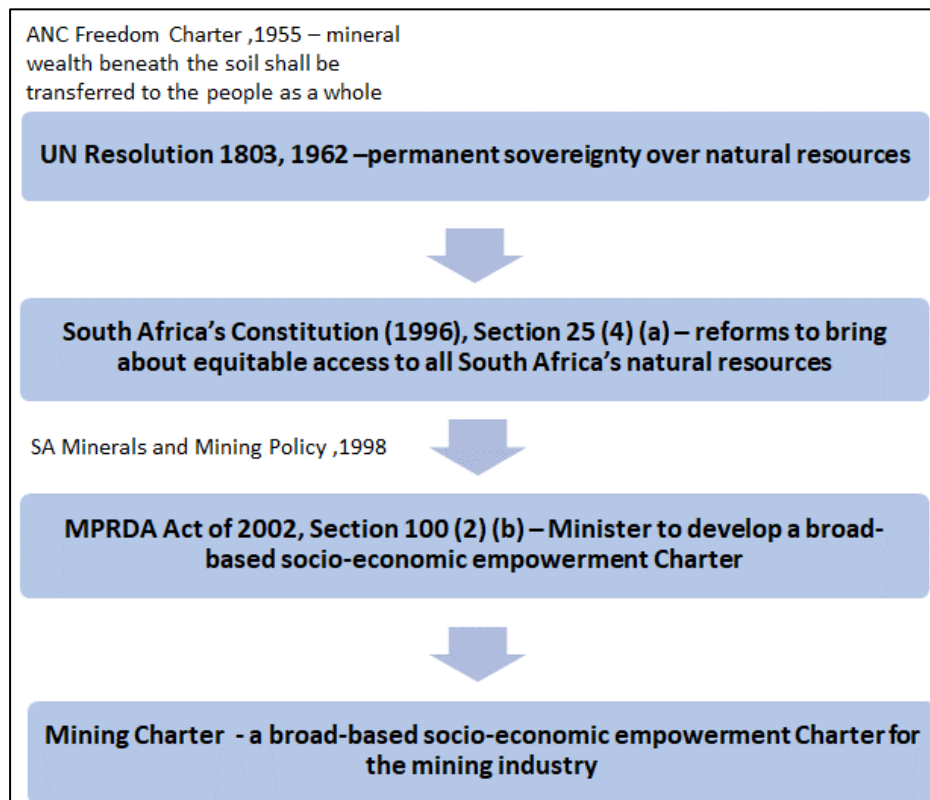


Figure 1.1: The link between the Mining Charter and the law of South Africa.

Following the South African Government's cabinet reshuffle in 2018, a new Minister of mineral resources was appointed. This change resulted in the 2018 version of the Mining Charter. Similar to the Mining Charter of 2017, the now-gazetted 2018 version of the charter was brought before the courts by the MCSA during 2021. The main argument was once again whether the Mining Charter has any legal standing. The court ruling, handed down in September 2021, stated that the Mining Charter is a policy document rather than a regulatory document (Minerals Council of South Africa, 2022).

It must be noted that the mining industry in South Africa, prior 1994, needed to transform not only as enforced by the new ruling government (Diale, 2014). South Africa's capital markets were gradually being re-integrated with international markets. Globalisation in areas such as trade liberalisation, privatisation and private-public partnerships necessitated the mining industry to contend, adjust and shift in attitude with respect to managing development programs. This meant a shift from a heavy-handed, controlling approach to engaging with multiple stakeholders with differing interests (Diale, 2014).

Based on the discussions in this section of the research report, South Africa seems to be struggling to formulate a working empowerment legislation that is, to a greater extent, acceptable to mining companies (as represented by the MCSA) and other affected and impacted stakeholders.

1.4 Research Motivation

This research was motivated by the importance of government mining policy on a country's mining competitiveness. Mining competitiveness drives the level of investments into the industry. Additionally, the government of South Africa continues to put emphasis on the need to transform the mining industry as one of the measures to redress injustices which were perpetuated by past laws. While it is acknowledged that the Mining Charter is a policy document, numerous reviews of the document and court battles between the DMR and the MCSA suggest uncertainty concerning the administration, interpretation and enforcement of the charter.

An understanding of the impact that the Mining Charter has on socio-economic development and the overall mining industry attractiveness is a critical step to assist the government in improving this socio-economic empowerment tool. An ideal mineral policy should take into consideration the needs of all affected stakeholders, including investors.

The literature review (refer to Appendix A Table A-1) conducted as part of this research study suggested that numerous studies have been conducted on the impact of the Mining Charter on socio-economic development and not so much on mining investments into South Africa. The impact assessment reports by the DMR also do not cover how mining investments are impacted by the requirements of the Mining Charter. This research gives an indication of how the Mining Charter potentially impacts mining competitiveness of South Africa. The results of international benchmarking qualitative description are expected to assist with the understanding of how South Africa's mineral policy and mining code compares with those of other mining jurisdictions.

1.5 Problem Statement

Mining investments like any other business investments have associated risks. Mining countries faces competition in attracting mineral project investments. It is natural for any investor to invest in assets that have minimal risk or a risk that can be mitigated to acceptable levels. In 2021, South Africa was ranked 77 (by the Fraser Institute think tank) out of the 84 countries surveyed in terms of the level of attractiveness for mining investments in the world (Minerals Council of South Africa, 2022). The survey

determines the investment attractiveness index which is weighted 40% by policy and 60% by mineral potential (Stedman & Green, 2018).

According to Mark Cutifani, a former Chief Executive Officer at Anglo American, South Africa was in a substantially better place in 2019 in terms of mineral policy certainty. The said chief executive, however, opined that the policy certainty was still not adequate for South Africa to compete for Anglo American's capital allocation. This was in response to a question by McKay (2019) who asked if the DMR had done enough to compete for Anglo American capital allocation. There was also another view by Norman Mbazima, a former Deputy Chairman of Anglo American, that the Mining Charter was a great policy document for existing mines. The mining executive believed that some work still needed to be done to create a business environment that is conducive for new mines to be built (McKay, 2019). The following commentary about the attractiveness of South Africa's mining industry was further made by other captains of the industry (Stedman & Green, 2019: p.38).

- "South Africa's revised Mining Charter continues to be an absolute deterrent for exploration companies", and
- "Rules around mining ownership discourage investment".

Based on the comments from captains of the mining industry, as exemplified above, it can be concluded that the uncertainty brought on by the Mining Charter, affects investment inflows into the mining industry.

The South African Government continues to put emphasis on the need to transform the mining industry as one of the measures to redress injustices which were

perpetuated by past segregating laws. The latest and last impact assessment report conducted by the DMR in 2015 concluded that the Mining Charter had been in existence for more than a decade, however, it was observed that there was still a long way for the sector to be fully transformed and compliant (Department of Mineral Resources, 2015). This suggests that mining companies are possibly experiencing hurdles to fully comply with the requirements of the Mining Charter.

1.6 Research Objectives

The objectives of this research study are to:

- Review Mining Charter compliance reports to understand the impact of the charter on socio-economic development in South Africa. The findings of this objective are presented in chapter 4.
- Analyse global exploration trends and exploration budgets as a percentage of Gross Domestic Product (GDP) for 20 countries, which together constitute 86,80% of the mining exploration budget. This is to gauge mining investment climate in South Africa and globally. The results of this research objective are also presented in chapter 4.
- Conduct a qualitative description of mineral policies and mining codes of ten mining jurisdictions to understand how these countries use mineral resources to advance socio-economic development goals. The results of this objective are also discussed in chapter 4 of this research paper.

1.7 Structure of the Research Report

Chapter 1 has introduced the research study by outlining the purpose of the study, research background, motivation, and the problem statement. Chapter 2 discusses the literature review to understand the status quo in regard to the research topic. The concept of socio-economic development, mining investment attractiveness in South Africa and the various amendments of the Mining Charter are also discussed. Chapter 3 outlines the research design and methodology that the research study followed. Chapter 4 presents the results and analysis of the findings. Research conclusions and recommendations are then discussed in Chapter 5.

2 LITERATURE REVIEW

2.1 Chapter Overview

Chapter 2 presents the literature review which was conducted to understand past studies on how natural resources are utilized to contribute to socio-economic development. Section 2.2 discusses the concept of the Mining Charter from South Africa's history point of view. The concept of socio-economic development is also unpacked in this section. Section 2.3 discusses mining investment attractiveness and section 2.4 lists the various versions of the charter and further discusses the performance and developments associated with the policy document. Section 2.5 closes off the literature review chapter with a summary of observations.

2.2 The Mining Charter and the concept of socio-economic empowerment

The Mining Charter was promulgated based on the history of how the discovery and exploitation of mineral resources were governed in South Africa's pre-democratic dispensation. The aim of the Mining Charter is to enable the government of South Africa "to achieve mutually symbiotic sustainable growth and broad-based and meaningful transformation of the mining and minerals industry" (Department of Mineral Resources and Energy, 2017: p. 6). The Mining Charter is a socio-economic empowerment tool for the minerals industry (Department of Mineral Resources, 2017).

Socio-economic empowerment is defined as a process of liberating people and communities from cycles of poverty and assigned roles and giving them resources such as employment, education, and health services to improve their social and economic opportunities (Mumley, 2021). In the context of the Mining Charter; the people and communities that the definition of socio-economic empowerment refers to

are the historically disadvantaged South Africans (HDSA's). As alluded to in section 1.3 of this research paper, pre-1994, the majority of black communities were excluded from participating in the mainstream economy hence the poverty levels witnessed today. An economy that excludes most of its citizens is not sustainable, therefore, transformation instruments such as the Mining Charter are relevant.

Traditionally, corporates have been involved in Corporate Social Responsibility (CSR) projects as part of good corporate governance. There are some similarities in what the Mining Charter and CSR projects are expected to deliver. The most notable similarity is in the area of community development. However, the difference is that the Mining Charter was developed as an instrument regulated by the government, and all mining companies are expected to comply with requirements of the charter. Targets of the charter are also broader than CSR projects of individual mining companies. Elements of the Mining Charter such as ownership, employment equity, inclusive procurement, supplier, and enterprise development are not addressed to the same degree by CSR projects of mining companies. Therefore, the Mining Charter is considered a better mechanism to deliver transformation at a greater magnitude as opposed to CSR projects. The introduction of the Mining Charter has shifted the concept of corporate social responsibility from a discretionary activity to a matter of regulatory compliance (Corrigan, 2019).

The stakeholder theory puts into perspective that other voices need to be heard during policy discussions (McAbee, 2021). This theory takes into cognisance the importance of all other stakeholders that are impacted or affected by the mining industry. The understanding is that as much as shareholders are important to any organisation, all other stakeholders are equally important, and their views and expectations need to be

heard and taken into consideration. The theory holds that businesses should strive to do right by all stakeholders, and subsequently the business will realise a true and sustainable success (McAbee, 2021). Summaries of academic articles read to understand what various scholars conclude on natural resources and socio-economic developments, are presented in Appendix A, Table A - 1.

2.3 Mining Investment Attractiveness

Mining exploration spending is the primary driver of future mining production and also an indicator of the mining investment attractiveness. The global demand for minerals drives the need for the production of such minerals. It is common knowledge that mineral resources occur in various countries across the globe.

Mining jurisdictions with higher mining competitiveness tend to attract a greater share of the exploration spending (Tilton, 1992). Traditionally, mining competitiveness has been driven mainly by the mineral endowment/geological potential of a country. Another school of thought is that government policy also plays a major role in mining competitiveness (Tilton, 1992). To date, it has been accepted that a country's mineral endowment and mining policies are the key drivers of its mining competitiveness.

As previously mentioned in section 1.4, the literature review conducted as part of this research study suggested that numerous studies have been conducted on the impact of the Mining Charter on socio-economic development and not so much on the impact on mining investments into South Africa (refer to Appendix A Table A-1). The impact assessment reports by the DMR also do not cover how mining investments are

impacted by the requirements of the Mining Charter. The analysis in section 4.3 attempts to give an answer to this research objective.

2.4 Mining Charter versions and performance

The first official Mining Charter was gazetted in 2004 and provided for a window period of 10 years in which the mining industry had to attain set targets as indicated in the Mining Charter score-card. The scorecard of the 2004 Mining Charter had nine elements as depicted in Table 2.1. The description and measure for each of the elements are also stated in the same table.

Table 2.1: The 2004 Mining Charter score-card (Republic of South Africa, 2004).

Mining Charter Elements	Description	Measure
Ownership and Joint Ventures	Achieved HDSA participation in terms of ownership of equity or attributable units of production	15% in 5 years 26% in 10 years
Employment Equity	- Published of a company's employment equity plan - Established and implemented a plan to achieve a target for 40% HDSA participation in management within five years? - Identified and fast tracking a talent pool? - Established and implemented a plan to achieve the target of 10% for women participation in mining within the five years?	Yes/No

Procurement	- Given HDSA's status as preferred supplier? - Identified current level of procurement from HDSA companies in terms of services, consumables and capital goods? - Indicated a commitment to a progression of procurement from HDSA companies over a 3 – 5 year time frame in terms of services, consumables and capital goods? And indicated extent of implementation of plan	Yes/No
Mine Community and Rural Development	Co-operated in the formulation of integrated development, has the company to engaged the local mine community and major labour sending area communities, co-operated with government in the implementation of these plans for communities where mining takes place and for major labour sending areas?	Yes/No
Human Resource Development	- Offered every employee an opportunity to be functionally and numerate and literate by the year 2005 and are employees trained? - Implemented career paths, including skills development plans, for HDSA employees - Developed systems through which HDSA's can be mentored?	Yes/No
Migrant labour	Subscribed to industry and government agreements to ensure non-discrimination against foreign migrant labour	Yes/No
Housing and living conditions	For company provided housing has the mine established measures to improving the standard of housing including conversion of hostels to family units, upgrading of hostels, and promoting of home ownership options for mine employees?	Yes/No

	For company provided nutrition has the mine established measures for improving the nutrition of mine employees? Showing and implementing a plan to progress the issue over time	
Beneficiation	• Identified current level of beneficiation • Established base line level of beneficiation and indication of the extent that this will have to be grown in order for the company to qualify for an offset?	Yes/No
Reporting	Report on an annual basis progress towards achieving commitments in annual report	Yes/No

At this juncture, it is critical to point out that of the nine elements of the 2004 Mining Charter, only the employment equity (EE) and ownership elements had numeric targets. To restate these targets; mining companies were required to achieve a target of HDSA participation in management of 40% within the first five years. The definition of HDSA at this time included black people and white women. For the ownership element of the charter, mining companies were required to achieve HDSA participation of 15% within 5 years and 26% in 10 years (Republic of South Africa, 2004).

For the other seven elements of mining charter, mining companies were required to answer yes or no to questions as indicated in Table 2.1. It is however important to mention that mining companies were further required to publish their plans for the set targets and annually submit reports that substantiate the yes or no responses to the questionnaires (Department of Mineral Resources, 2009). The requirement for the submission of supporting reports was not stated on the scorecard. This may have led

to an incorrect assumption by some of the mining companies and the general public, that only a yes or no answer was sufficient.

As previously mentioned in section 1.3, the first assessment of industry compliance with the 2004 Mining Charter was conducted in 2009 by the DMR. The conclusion of the assessment indicated that good progress was made by mining companies with regard to compliance with HDSA participation in management (one of the four EE sub-elements). It was however further observed that there was a significant number of HDSA's who occupy middle management positions with an insignificant number holding key decision-making positions. According to this 2009 assessment, all other elements of the charter were poorly complied with. The assessment further concluded that the Mining Charter remains a useful tool to effect transformation, however; there seemed to be challenges regarding its effective implementation (Department of Mineral Resources, 2009). Following the impact assessment, the DMR identified a number of shortcomings with the 2004 Mining Charter. These shortcomings are summarised as follows:

- There was a lack of a definitions chapter leading to inconsistent interpretations.
- The definition of HDSA needed to be aligned with the definition in the B-BBEE Act. The definition also needed to be more inclusive of people with disabilities.
- The DMR interpreted the ownership element as referring to voting rights, economic interest and net value. The mining industry interpreted the same element as referring to economic interest. Net value was interpreted as an additional ownership criterion. A further clarity was needed in interpreting the ownership element.

- The HDSA in management needed to apply across the business to include support services and core business positions.
- It was also deduced that the human resource development (HRD) element needed to incorporate research and development and not just functional literacy and numeracy.

The assessment report recommended that the 2004 Mining Charter needed to be reviewed in order to strengthen and sharpen its effectiveness in driving transformation. The report further recommended that non-compliance to the Mining Charter should lead to severe penalties on the mining companies' side. Another recommendation was for the DMR to build capacity for effective and efficient monitoring and evaluation of compliances with the Mining Charter (Department of Mineral Resources, 2009).

Post the release of the Mining Charter in 2004 and while mining companies were in the process of working towards compliance with the charter, a global economic crisis hit in 2008. In response to the economic crisis, mining stakeholders comprising the Department of Minerals and Energy (DME), industry and labour unions formed a Mining Industry Growth, Development and Employment Task Team (MIGDETT). MIGDETT was mandated to strategize and position the mining industry on a path of transformation and sustainability (Sabinet, 2010). In addition to already existing mining charter elements which address transformation, commitments were made pertaining to innovation, regulatory framework, infrastructure and sustainability (Department of Mineral Resources, 2010). It appears that it was on this background of a global economic crisis that the sustainability element was introduced in the 2010 Mining Charter. Mineral resources are exhaustible by nature and therefore sustainability

considerations became even more relevant. Table 2.2 shows the 2010 Mining Charter scorecard.

Table 2.2: The 2010 Mining Charter score-card (Republic of South Africa, 2010)

Mining Charter II Elements	Description	Measure
Ownership	To enable meaningful economic participation of HDSA. The only offsetting permissible under the ownership element is against the level beneficiation	26% meaningful economic participation, by 2014 26% full shareholder rights, by 2014
Employment Equity	• HDSA demographic representation at: Executive Management (Board), Senior management (EXCO), Middle management, Junior management and core and critical skills. • Identify and fast-track existing talent pools so to ensure high level operational exposure	40% across all management levels by 2014 No numeric target for identified and fast-tracked talent pools

Procurement	• Procurement of consumer goods, services and capital goods from BEE entities. • Multinational suppliers of capital goods to contribute a minimum of 0.5% of annual income generated from local mining companies. Funds meant for socio-economic development of local communities	• 40 % of capital goods by 2014 • 70% of services by 2014 • 50% consumer goods by 2014 • 0.5% of income generated from local mining companies
Human Resource Development	Invest in essential skills development activities reflective of the demographics, including support for South African based research and development (R&D) initiatives	5% of annual payroll by 2014 (excluding the mandatory skills levy
Housing and living conditions	Upgrading and conversion of hostels to obtain occupancy rate of one person per room	100% by 2014

	Upgrade or convert hostels into family units	100% of family units established by 2014
Mine Community Development	Conduct ethnographic community collaborative and consultative processes to define the needs of communities	100% of projects implementation
Sustainable development and growth	• Improvement of the industry's environmental management. • Improvement of the industry's mine health and safety performance • Utilisation of South African based research facilities for samples analysis of samples	• 100% by 2014 • 100% by 2014 • 100 % by 2014
Beneficiation	Contribution towards beneficiation (measure effective from 2012)	Additional production volume contributory to local value addition beyond the baseline. Section 26 of the MPRDA (% above baseline)
Reporting	Report the level of compliance with the Mining Charter	Annually

As per Table 2.2, the 2010 version of the Mining Charter retained all the elements of the 2004 version except for the 'migrant labour' element. Furthermore, the following amendments were introduced in the 2010 Mining Charter:

- A new definition chapter which addressed inconsistent interpretations.
- In addition to ownership and employment equity, there were now measurable targets for all other elements.
- The definition of HDSA remained unchanged and referred to historically disadvantaged South Africans.
- The ownership element was further expanded to imply meaningful economic interest and full shareholding rights with identifiable beneficiaries in the form of BEE entrepreneurs', workers (including Employee Shares Ownership Plans – ESOP's) and communities. The 2009 impact assessment revealed that the reported level of ownership had been concentrated in the hands of anchor partners and Special Purpose Vehicles representing a handful of black beneficiaries.
- In terms of the employment equity, the 2010 charter required mining companies to achieve a minimum of 40% HDSA representation across all management levels from junior up to boards representation. The 2004 requirement for 10% women participation in mining (as a percentage of all employees) was removed in the 2010 Mining Charter version.
- The procurement sub-elements now had numeric targets, as listed in Table 2.2: The 2010 Mining Charter score-card. In addition to the procurement of local goods and services, multinational capital goods suppliers were expected to

contribute a minimum of 0.5% of the annual turnover generated from local mining companies. These incomes were to be channelled towards social economic development of local communities.

- Human resource development, housing and living conditions and mine community developments now had numeric measures.
- The sustainability element had been introduced and covers areas of environmental management, health and safety and utilisation of South African based facilities for sample analysis. Targets were clear and could be measured.

Amendments in the 2010 Mining Charter were consistent with the recommendations that were made by the DMR following the 2009 Mining Charter impact assessment report.

Subsequent to the release of the 2010 Mining Charter, the second impact assessment report conducted by the DMR was instituted in 2015. Findings of this impact assessment report can be summarized as follows:

- A significant number of mining right holders reported to have met and/or exceeded the 26% HDSA participation. However, the concept of meaningful economic participation which requires empowerment of BEE entrepreneurs, mining communities and employees remained subtle. The assessment also concluded that blue chip companies conclude deals mainly with communities and employees. On the contrary, small and medium mining companies empower BEE entrepreneurs and not so much of communities and employees.

- The employment equity data showed that right holders did not meet the 40% HDSA participation requirement. When considering the Economically Active Population level, African females remained underrepresented and white males still dominated the middle and senior management roles.
- With regards to the housing and living conditions element, the assessment showed that only 55% of the mining right holders met the 2014 target of improving the conditions of mine workers living in hostels.
- The procurement data indicated that most mining right holders did meet the 2014 procurement sub-elements targets.
- 36% of the mining right holders achieved the target on mine community development.
- With regards to the HRD element, the assessment report concluded that most of rights holders did not meet the target of spending 5% of annual payroll on skills development.
- The report also concluded that less than half of the mineral right holders, across all employment sizes, did not achieve the Environmental Management Plan (EMP's) projects implementation. The health and safety targets were also not fully implemented. The DMR however, did acknowledge the overall health and safety improvements by the mining industry. The assessment also found out that the use of South African facilities for research and development is encouraging.

As previously highlighted in section 1.3 of this research paper, the key conclusion of the 2015 assessment was that the Mining Charter had been in existence for more than a decade, however, it was observed that there was still a long way for the sector to be

fully transformed and compliant. Findings of the 2015 assessment led to another review of the Mining Charter, resulting in the 2017 Mining Charter, which was released in June of the same year.

The 2017 charter was disputed by the MCSA, as previously alluded to in section 1.3 of this research paper. An appointment of a new Minister of mineral resources in 2018 led to a subsequent discontinuation of the 2017 version of the Mining Charter. This research report will thus not delve any deeper than to mention that there was a 2017 Mining Charter draft before the currently enforceable 2018 Mining Charter. Table 2.3 illustrates the 2018 and latest Mining Charter score-card.

Table 2.3: The 2018 Mining Charter score-card (Republic of South Africa, 2018)

Mining Charter III Elements	Description	Measure
Ownership	To give effect to meaningful economic participation and effective ownership of the country's mineral resources by Historically Disadvantaged Persons (HDP's).	- New mining rights - 30% BEE shareholding (5% qualifying employees, 5% host community, 20% BEE entrepreneur). - Existing rights - 26% (meaningful economic participation, full shareholder rights). - Pending rights - 26 % (required to top up 26% to 30% within the 5

		years transitional period).
Inclusive Procurement, supplier and enterprise development	- Promoting economic growth through the development and nurturing of small, medium and micro enterprises and suppliers of mining goods and services. - Building of South Africa's industrial base through enterprise supplier development. - Spend a minimum of 70% of total Research & Development (R&D) budget on SA based facilities. - Analyse 100% of all mineral samples in SA based laboratories.	70% of the procurement spend on South African manufactured goods. 21% from HDP's owned and controlled company, 5% from women or youth owned and controlled, 44% from a BEE compliant company. 80% spend on services sourced from South African companies. Of the 80%, 50% must be by HDP providers, 15% by women owned and controlled companies, 5% by youth owned and controlled companies, 10% by BEE compliant company. 70% of total R&D 100% mineral samples analysis.
Employment Equity	Achieving equity in the workplace	Board - 50% HDP, 20% women.

	• Core and critical skills which includes Science, Technology, Engineering and Mathematics (STEM) – to diversify existing skills pool. • Career progression aligned with Social and Labour Plans (SLP's). • Disabled people as a percentage of all employees, reflective of demographics.	• Executive Management - 50% HDP, 20% women. • Senior management ((Executive Committee, (EXCO)) - 60% HDP, 25% women • Middle management - 60% HDP, 25% women • Junior management level - 70% HDP, 30% women. • Core and critical skills – 60% HDP. • minimum of 1.5% of employees with disabilities.
Mine Community Development	Meaningful contribution towards Mine Community Development.	100% of all approved projects.
Housing and Living Conditions	• Upgrading or conversion of hostels into family units and single quarters • Employer assisted housing scheme	Single units Family units (other targets as per the housing and living conditions standard signed in 2019)

Human Resource Development	Invest in essential skills such as engineering, technology and science for skilled and productive workforce.	Minimum of 5% leviable amount.
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The notable changes in the 2018 Mining Charter are summarised as follows.

- The Mining Charter now has six elements with reporting, beneficiation and sustainable development not included.
- The term HDSA was now replaced by Historically Disadvantaged Persons (HDP's). As defined in the MPRDA, HDP's refers to any person, category of persons or community, disadvantaged by unfair discrimination before the Constitution took effect (Republic of South Africa, 2002). The Mining Charter has adopted the same definition.
- The ownership element now differentiates and clarifies targets for existing mineral rights, pending applications and new rights, as per Table 2.3. The 30% BEE shareholding in new mineral rights is further split to highlight minimum shareholding for each of the HDP beneficiaries.
- Although subtle, there is quite a big change on the procurement element requirements. Provision is now also made for enterprise and supplier development (ESD). Research and development and the processing of samples sub-elements, previously under sustainable development and growth element, are now under the procurement element. The 2010 Mining Charter requirement of a 0.5% of income from multinational supplies of capital goods is now omitted. There is a drop from

40% to 21% of mining goods produced by a 100% wholly HDP entity, and a drop from 70% to 50% of services sourced from a 100% wholly owned HDP entity. The drops could be attributed to the recognition that there were fewer available HDP entities which could produce capital goods and provides services needed by the mining industry. There is 10% of the procurement budget on services and up to 30% on mining goods, which may be offset against supplier and enterprise development. One of aims of the Mining Charter's implementation of the supplier and enterprise development initiative is to build South Africa's industrial base in critical sectors of production and value addition. Supplier and Enterprise Development is also a priority element of the B-BBEE scorecard and its inclusion in the Mining Charter enhances alignment between the Mining Charter and B-BBEE Codes of Good Practice.

- The targets for employment equity are increased across all management levels.
- Junior mining companies with annual turn-over of 10 million Rands and less are required to comply with only four elements of the charter including ownership, employment equity, human resource development and mine community development. Mining companies with annual turn-overs of between 50 and 150 million Rands are expected to comply with all the elements of the Mining Charter except for housing and living conditions.
- With regards to compliance with the 2018 Mining Charter, this research report acknowledges that an exhaustive list of clauses in the 2018 Mining Charter were challenged in court and subsequently set aside. More details on this are available in the September 2021 High Court ruling, a document which is available in the public domain. Although these clauses were set-aside, no amendments have been to the 2018 Mining Charter. Some of the mining companies such as Kumba, Anglo-

Platinum and Thungela still report their socio-economic and transformation indicators in accordance with the Mining Charter score-card. These indicators are reported both in Integrated Annual Reports and compliance reports submitted to the department of mineral resources. This suggests that mining companies do not have concerns regarding the use of the Mining Charter score-card as a template. These social performance reports provide data which is useful in assessing the impact of the Mining Charter on socio-economic development.

2.5 Chapter summary

Chapter 2 has discussed and improved understanding on the Mining Charter in terms of its history and aim. There have been three versions of the charter since 2004, with the 2018 being the current effective one. Mining-related corporate social responsibility activity in South Africa has shifted from discretionary to a matter of regulatory compliance. Chapter 3 of the research paper discusses the methodology and data collection processes.

3 RESEARCH METHODOLOGY AND DATA COLLECTION

3.1 Chapter Overview

Chapter 3 describes the research design that this research study followed. The type of analysis and tools used are also discussed. The data collection process is described and includes the sources of all data and information used.

3.2 Research Design

With regards to the impact of the Mining Charter on socio-economic development, the study predominantly followed a qualitative description of secondary data. To assess, the impact of the Mining Charter on mining investment attractiveness in South Africa, the study followed a quantitative methodology as exploration spending figures are specific and measurable numbers.

3.3 Methods and Data collection

To address the objectives of this research, the following methods and analysis were followed.

- The impact of the Mining Charter on socio-economic development was assessed by reviewing government compliance reports and MCSA publications.
- With regards to mining investment attractiveness analysis, the research took into consideration the top 20 mining countries in terms of global exploration budget share. The countries together constituted 86.80% of global exploration budget in 2022. Ratio analysis of the percentage of exploration spending as a

percentage of GDP was conducted. A comparison of the exploration budget as a percentage of GDP normalises the comparison as it takes out the influence of the size of a country's economy.

- The exploration budget data was sourced from S&P Global Market Intelligence (2023). The GDP figures were sourced from The World Bank (2023). The 2022 data was used as it was the latest available, particularly the GDP figures. The data used is shown in Appendix A, Table A-3 of this paper. The data was retrieved during November and December months of 2023. Microsoft Excel tools were used for the analysis. The information for trend analysis of global exploration budget was also sourced from S&P Global Market Intelligence (2023).
- A qualitative description was conducted on 10 mining jurisdictions including South Africa (the Mining Charter), Canada, Australia, Brazil, Chile, Botswana, Zambia, Tanzania, DRC and Ghana. This choice of method of study was useful for understanding the differences and similarities between the Mining Charter and other global socio-economic interventions supported by natural resources. The mining codes and mineral policies of each of the countries were retrieved from internet sources. The information was gathered mainly during the course of 2023.

3.4 Chapter summary

The purpose of this chapter was to highlight the methodology that the research study followed as well as the type of analysis conducted in answering the research questions.

4 ANALYSES AND DISCUSSION OF RESULTS

4.1 Chapter Overview

Chapter 4 reviews the compliance with the elements of the Mining Charter by mining companies and further discusses the global exploration budgets as a measure of mining competitiveness. The chapter concludes by discussing how mining jurisdictions Canada, Australia, Brazil, Chile and five African countries including Ghana, Botswana, Tanzania, DRC and Zambia are using natural resources to support socio-economic developments.

4.2 The impact of the Mining Charter on socio-economic development in South Africa

As previously mentioned in section 1.5, the South African Government continues to put emphasis on the need to transform the mining industry as one of the measures to redress injustices which were perpetuated by past segregating laws. The impact assessment report conducted by the DMR in 2015 had concluded that the Mining Charter had been in existence for more than a decade, however, it was observed that there was still a long way for the sector to be fully transformed and compliant (Department of Mineral Resources, 2015).

Despite the high court ruling that the Mining Charter is a policy document and not a law, some of the mining companies such as Kumba and Anglo-Platinum still report their socio-economic and transformation indicators in accordance with the Mining Charter score-card. These indicators are reported both in Integrated Annual Reports and compliance reports submitted to the DMRE.

This research report was further intended to analyse compliance with the 2018 Mining Charter and beyond. However, not enough data could be obtained to undertake such

analysis. The research data collection process involved the reading of mining company annual reports and website searches. Although some of the companies do report as guided by the Mining Charter score-data, the data was not adequate to represent the mining industry. As an example of data inadequacy, Table A-2 in Appendix A indicates the BEE ownership data that could be retrieved in the public domain. The incomplete data could be explained by the high court ruling where some of the Mining Charter clauses were set-aside. In a report to the parliament of South Africa, the MCSA also argued that there is no standardised score-card against which to measure compliance with the 2018 charter (Minerals Council South Africa, 2023).

Based on the aforementioned obstacles and the absence of any latest impact assessment report by the department of mineral resources, this section 4.2 relied on an independent study conducted by the MCSA during 2019. The assessment relied on the 2018 compliance report submissions to the DMR by mining companies.

4.2.1 BEE Ownership of Mining Companies

The first version (2004) of the Mining Charter did not enforce identifiable beneficiaries. Employees and communities were included as beneficiaries in the amended 2010 Mining Charter. This took effect after it was revealed in the 2009 assessment report that the reported level of ownership had been concentrated in the hands of anchor partners and Special Purpose Vehicles representing a handful of black beneficiaries (Department of Mineral Resources, 2009).

The 2019 MCSA independent study concluded that mining companies achieved 39% of HDSA shareholding against the 2010 set target of 26%. The sample size was companies which represented more than 70% of all mining production in South Africa

(Minerals Council South Africa, 2019). It has to be noted that the published Mining Charter did not use weighted targets, whilst the MCSA assessment report uses weights. The referred MCSA report is not explicit on what was used for the weighting. Figure 4.1 shows the findings of this particular study and the split in BEE shareholding amongst the three main identified beneficiaries. Since the promulgation of the MPRDA, a value of R300 billion has been created in empowerment deals, according to Minerals Council South Africa (2023).

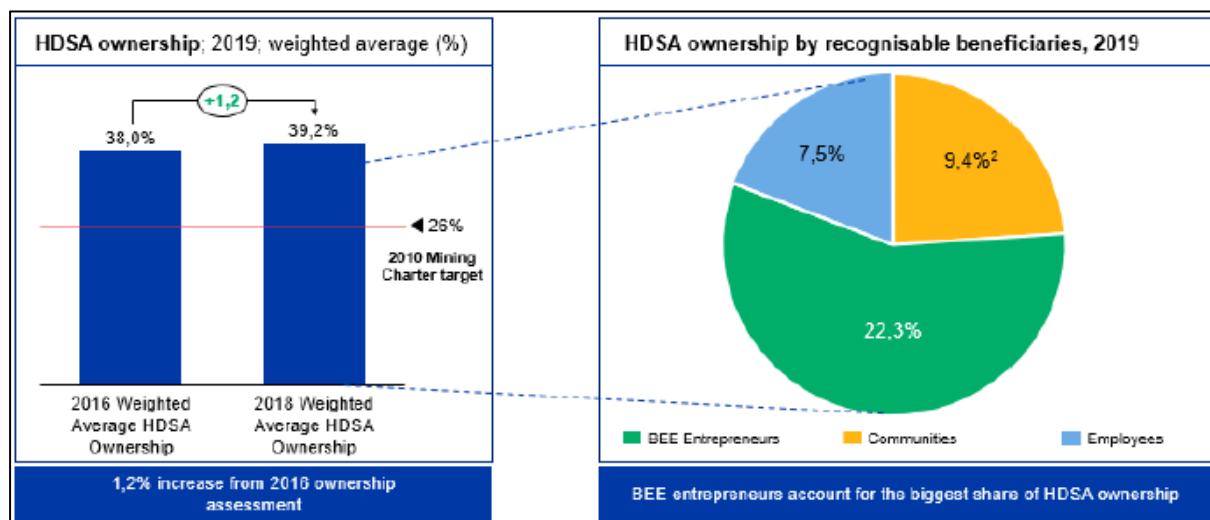


Figure 4.1: The overall industry HDSA ownership (Adopted from Minerals Council South Africa, 2019).

Based on the compliance figures depicted in Figure 4.1: The overall industry HDSA ownership (Adopted from Minerals Council South Africa, 2019), it is fair to deduce that BEE empowerment deals have created value for the groupings which are benefitting. However, as this form of citizen empowerment is one of the factors which is believed to deter mining investments (as discussed in the problem statement of this report), it becomes imperative to understand the cost vs benefit between BEE deals in their current form and the cost of the deterred mining investments.

4.2.2 Procurement and Enterprise Development

The 2010 Mining Charter called for procurement of 40% of capital goods, 70% of services and 50% of consumables to be sourced from BEE entities. The MSCA report indicates that 87 or 70% of mining right holders analysed far exceeded the stipulated targets with 79% achieved for consumables, 75.4% for capital goods and 75.1% for services. The study also reports that 26 mining right holders (30% of mining right holders analysed) did not meet the minimum 70% requirement for procurement of services.

4.2.3 Human Resource Development

Under HRD, mining companies were expected to spend a minimum of 5% of their annual payroll on HRD programmes. In 2018, the sampled mining right holders spent 4.8% of their annual payroll on HRD. 72% of the 86 mining rights holders analysed met the minimum requirement set in the 2010 Mining Charter.

4.2.4 Employment Equity

For the employment equity element, the MSCA study analysed 92 mining right holders. The results achieved were as follows: 78.7% for Core and Critical Skills, 70.5% for Junior Management, 61.4% for Middle Management, 52.8% for Senior Management and 58,2% for Top Management. The industry view shows that all these targets were achieved against the 2010 set target of 40% HDSA representation across all of the managerial levels.

4.2.5 Mine Community Development

With regards to the mine community development element, the 2010 Mining Charter stipulated that mining right holders are required to consult and engage with host

communities. The results of the MCSA study indicates that 89% of the 85 mining right holders analysed are compliant with the target.

4.2.6 Conclusion on the impact of the Mining Charter on socio-economic development

Based on the results of the independent study conducted by the MCSA, it can be deduced with that the Mining Charter is having a positive impact on socio-economic development in South Africa. The MSCA study was conducted four years after the DMR released its Mining Charter impact assessment report in 2015. In that report, the DMR concluded that the Mining Charter had been in existence for more than a decade, however, it was observed that there was still a long way for the sector to be fully transformed and compliant.

With the MCSA report painting a now positive picture, there needs to be alignment in how the mining industry and the DMRE measure compliance with the charter. The issue raised by the MCSA that there is no standardised score-card against which to measure compliance with the 2018 charter is concerning and needs to be addressed. As long as there are discrepancies with the reporting and analysis of compliance data, it would be difficult to get the real answer on transformation of the industry.

4.3 Mining Investment Attractiveness in South Africa

As demonstrated in section 1.3, the Mining Charter continues to stir controversies amongst various mining stakeholders. The purpose of this section 4.3 is to understand global mineral exploration trends and to discuss the exploration budget in South Africa and globally, as an indicator of the mining investment climate.

4.3.1 Mineral exploration trends

Mineral exploration is split into three categories which includes grassroots, late stage and feasibility and mine site. Grassroots exploration, often referred to as greenfields exploration, is associated with a hope for new mineral deposit discoveries away from known deposits. Late stage and mine site exploration, also known as brownfields exploration, is conducted with the aim of converting known resources to reserves (late stage), and to further delineate the orebody for possible life-of-mine extension (Eggert, 1993)

Figure 4.2 is a depiction of the exploration budget in South Africa from 1997 to date. The term exploration budget is adopted by S&P Global Market Intelligence (2003) and simply refers to exploration spending. The budgets indicated in the graphs include spending in all the three categories of mineral exploration.

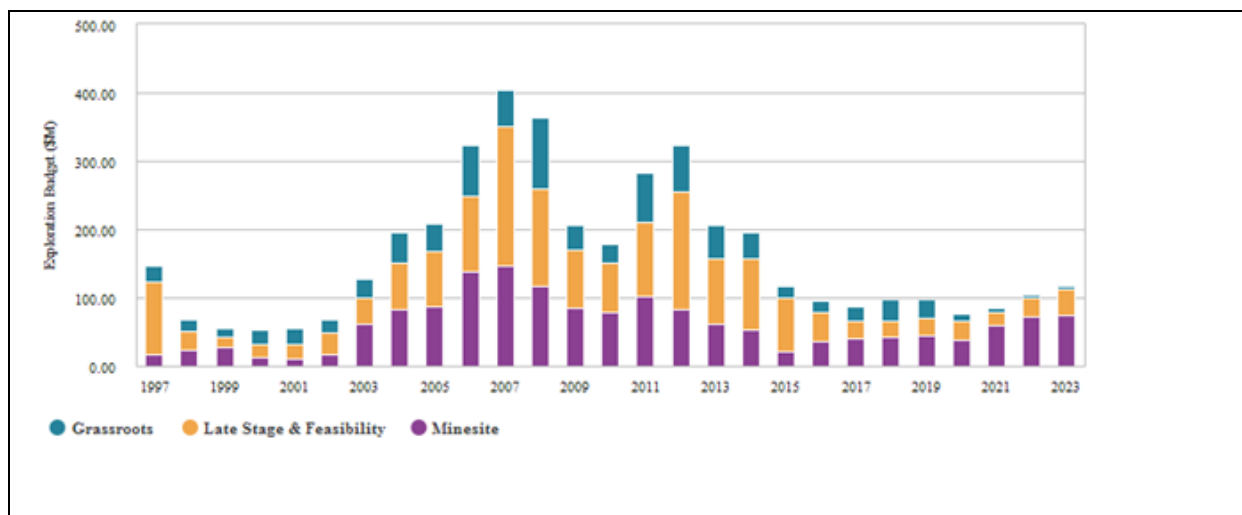


Figure 4.2: Exploration budget of South Africa from 1997 – 2023 (source: S&P Global Market Intelligence, 2003).

The figure shows a more than 300% increase in exploration budget between 2000 and 2007. The increase was realised despite the new regulatory environment that involved the adoption of a 1998 White Paper, A Minerals and Mining Policy for South Africa,

and the subsequent release of the Mining Charter in 2004. During the same period, the DMR stated that they had received more than 22 000 mining rights applications (Department of Mineral Resources, 2009). According to the department, the increased applications was an indication of a favourable investment climate. Figure 4.3 shows the Gross Fixed Capital Formation (GFCF), a measure of the value added in fixed assets within an economy, of South Africa's mining industry between 1998 to 2008.

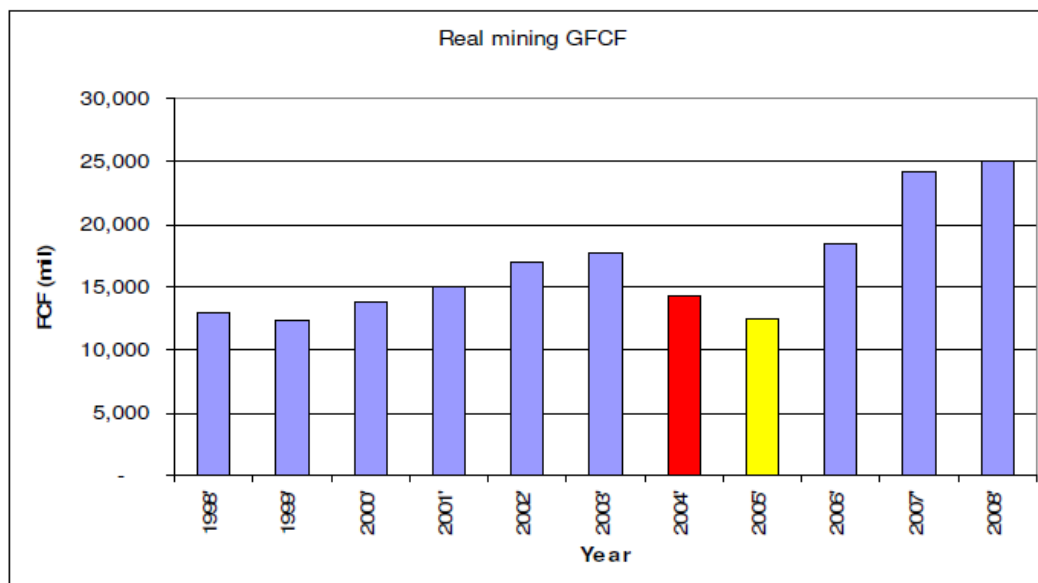


Figure 4.3: Gross Fixed Capital Formation from 1998 – 2008 (source: Department of Mineral Resources, 2009).

According to the DMR, the 2004 to 2005 decline in the GFCF was attributed to uncertainty of the introduction of the Mining Charter. However, once the confidence in the regulatory regime was attained, the GFCF increased at a faster pace (Department of Mineral Resources, 2009) until 2008 when the world's economy was negatively impacted by the great financial crisis. Although the DMR attributed the improved GFCF to regulatory confidence, South Africa's exploration budget appears to coincide with that of the rest of the world. Figure 4.4 shows global exploration budget trends from

1997 to 2023 and Figure 4.5 illustrates the exploration budgets for selected few mining jurisdictions, as annotated on the figure.

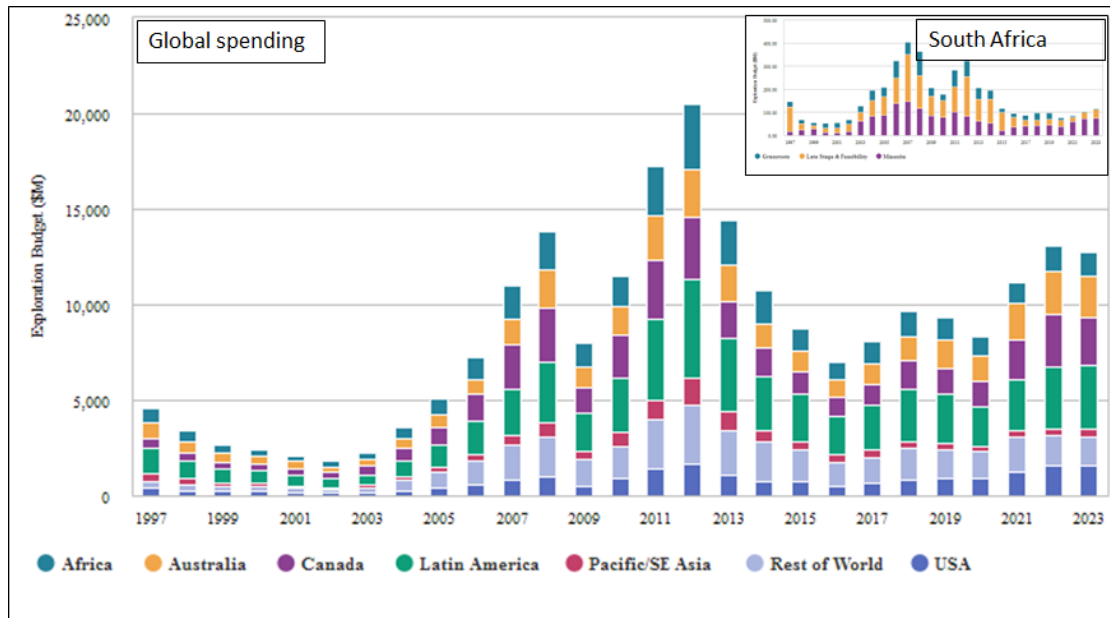


Figure 4.4: Global exploration budget trend (source: S&P Global Market Intelligence, 2003).

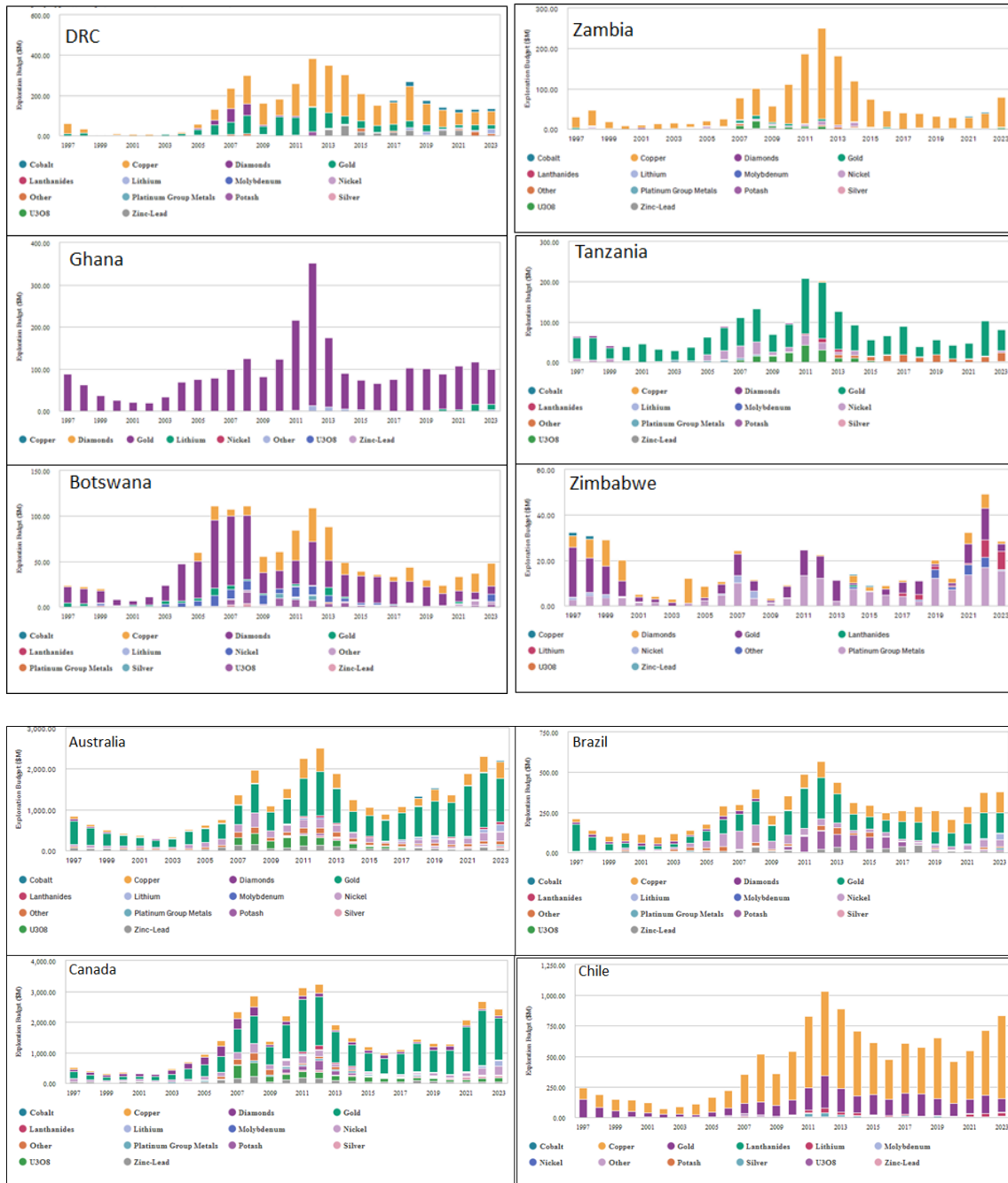


Figure 4.5: Exploration budget trends for few selected mining jurisdictions as annotated on the graphs (source: S&P Global Market Intelligence, 2003).

According to Figure 4.4 and Figure 4.5, global mineral exploration budgets appears to correlate well with major global events that affect the world's economy. Table 4.1 summarises global trends which affected the demand for minerals and subsequent mineral exploration budget.

Table 4.1: Summary of global economic activity since 2002 to date (source: Adopted from Helbling, 2012)

Year	Event
2002 – 2007	Accelerated economic growth in emerging and developing economies, with China being the chief importer of mineral products
2008 – mid 2009	Depression related to global financial crisis
Mid 2009 - 2012	Buoyant recovery in emerging markets, rapid return of demand for commodities to precrisis levels
2012 - 2016	Slowing global economic activity, reduced demand of minerals as China's growth slowed down
2016 - 2019	Sluggish recovery
2019 - 2020	COVID 19 pandemic
2020 - present	Recovery, possibly driven by the demand for critical minerals, which are crucial for energy transition, technological developments, electric cars etc

Based on the interpretation of the exploration budget graphs, South Africa's exploration spending mirrors global exploration budget trends, which in turn coincides with global major events. Section 4.3.2 delves deeper and looks at the exploration budget in South Africa versus other mining countries.

4.3.2 Global and local mineral exploration budgets

As previously mentioned in the introduction of section 4.3 of this research report, expenditure on exploration is a leading indicator of investment that goes into growing the mining industry.

Figure 4.6 shows exploration budgets for the top 20 countries, which together accounted for 86.80% of global spending in 2022. During the same year of 2022,

South Africa accounted for 0.79% of global exploration budget, as illustrated by Figure 4.7.

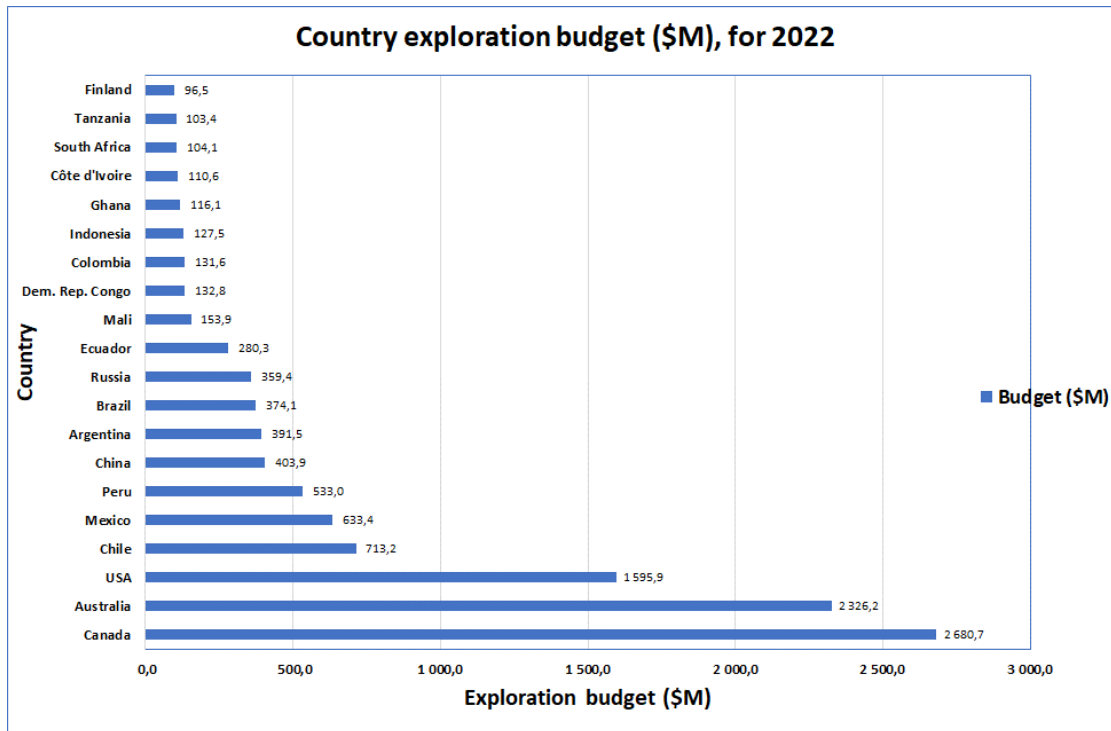


Figure 4.6: Global exploration budget share in million US dollars (data source: S&P Global Market Intelligence, 2023)

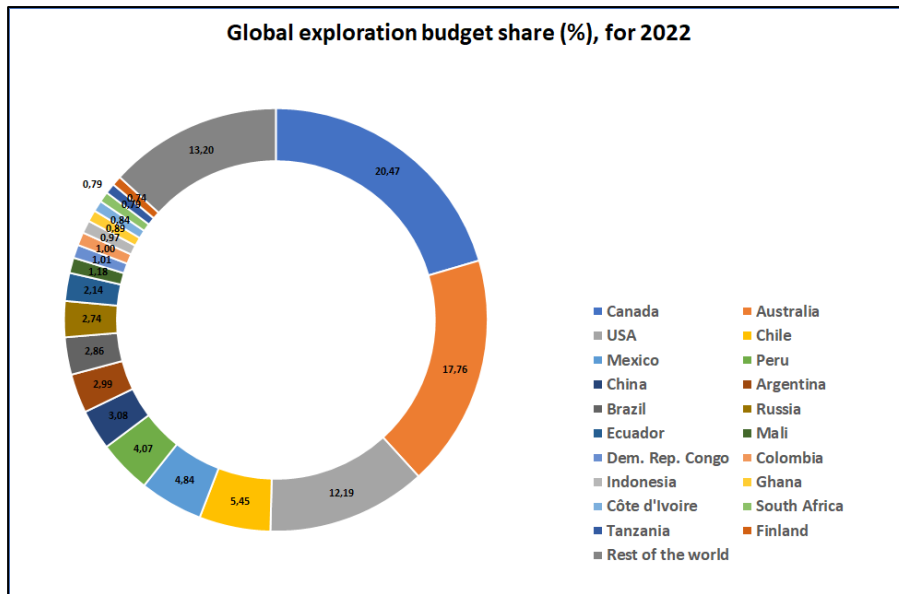


Figure 4.7: Global exploration budget share in percentages (data source: S&P Global Market Intelligence, 2023).

To compare the exploration budget of different countries, such budget as a percentage of GDP was used. This process normalises the comparison as it takes out the influence of the size of a country's economy. Figure 4.8 illustrates the results of the analysis of mining countries' exploration budget as a percentage of its GDP.

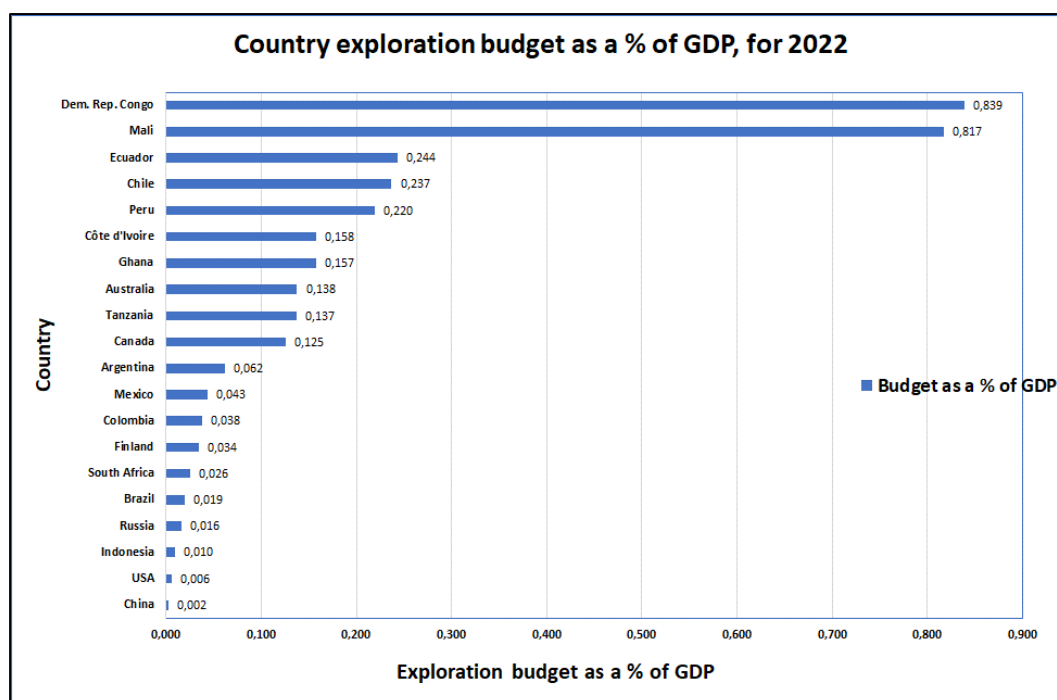


Figure 4.8: Mining countries exploration budget as a percentage of GDP for 2022 (data source: S&P Global Market Intelligence, 2023 and The World Bank, 2023)

South Africa ranks relatively low in its exploration expenditure in terms of both absolute budget and percentage of exploration budget to GDP. When considering the percentage of exploration expenditure relative to GDP, South Africa is ranking low even when compared to other developing countries and some mining jurisdictions in Africa such as the DRC, Mali, Cote d'Ivoire and Ghana. This may reflect less attractiveness of the South African industry to investors who choose to rather invest in other countries. Low exploration spend also raises concerns of the industry contracting rather than expanding in the long term, unless there are interventions put in place to attract more investment into mining. Some of these interventions could be policy certainty and/or investor friendly legislation. According to the Minerals Council South Africa (2019), South Africa's mining industry will also struggle to respond to future commodity booms, if current net investments in the sector remain depressed.

All the exploration budget graphs used in section 4.3 were directly sourced from S&P Global Market Intelligence (2023). In a disclaimer, the company cautioned that the reported exploration budget figures exclude exploration spending on coal, iron ore, aluminium, oil and gas and many other industrial minerals.

4.4 Global Mining Codes, Mineral Policies and Socio-Economic Development

4.4.1 Canada

Mining and metals are critical to Canada due to their substantial contribution to the country's economic and social well-being. On a national level, the government of Canada's responsibilities in mining include putting focus on international trade and investment, science and technology, environmental protection, and Aboriginal affairs (Government of Canada, 2017). Aboriginal affairs herein referred, are matters which affect Aboriginal peoples of Canada. Aboriginal communities are indigenous groups of people who first inhabited the lands of Canada. They have different and distinct cultures, customs and speak different languages. The Canadian Constitution recognises three main groups of these communities. These includes Indians (commonly referred to as the First Nations), the Metis and the Inuit (Natural Resources Canada, 1996).

Mining activities in Canada are regulated by the jurisdiction of provinces and territories in which the resources occur. Majority of the mineral rights are owned by the provinces and territories except in Nunavut. However, some of the mineral rights may also be held by the federal government, by Aboriginal groups or by private entities. Generally, there are limited restrictions on mining rights being directly or indirectly owned by foreign company (ICLG.com, 2022).

The federal government has direct regulatory influence only on Uranium (in the context of the nuclear fuel cycle), mineral activities in offshore areas and federal land, and mineral activities related to State Owned Enterprises (Natural Resources Canada, 1996). A minimum of 51% Canadian ownership is required for all uranium mineral properties. Canada does not have free carry rights or options to acquire shareholding in mineral properties (ICLG.com, 2022).

The Mineral Policy of Canada consists of six principal objectives of which five of these objectives are centred around sustainable development and international competitiveness. The more relevant policy objective and in line with the research topic, is the emphasis given to Aboriginal's participation in mining.

Canada promotes the participation of Aboriginal communities through information sharing on Aboriginal-industry leading practices. Between the years 2000 to 2021, an estimate of 524 agreements were signed between Aboriginal communities or government and mining and exploration companies (Natural Resources Canada, 2022). Examples of such agreements include Letter of Intent, Exploration Agreements, Cooperations Agreements and/or Memorandum of Understanding, Surface Lease Agreements, and Impact and Benefit Agreements (IBA's), Participation Agreements or Socio-economic Agreements. The IBA's typically contain provisions for business opportunities through set-aside contracts and joint ventures, training and employment, social and cultural considerations, environmental monitoring, and funding arrangements. Table 4.2 summarises some of the Partnership Agreements case studies in Canada.

Table 4.2: A summary of case studies of Partnership Agreements in Canada (*Natural Resources Canada, 2023*).

Partnership Agreement	Salient points of the Agreements
Musselwhite agreement - Ontario	• Targets for First Nations business opportunity development, employment and environmental protection • Revenue sharing based on production performance. • Management of funds is decided by the communities • Committees established to monitor socio-economic issues • Committees comprise chiefs, community representatives and mine management. • As of 2017, 19% of the workforce were indigenous employees. Target was 30%. • Procurement of goods and services from the locals • Social and community support, e.g., recreational facilities, crisis intervention workshops etc.

Diavik - Northwest Territories (Socio-Economic Monitoring Agreement)	• Commitments to provide employment, training, scholarships and business opportunities to local Aboriginal people. • Each year, Diavik invests in local communities through scholarships and sponsorships.
Ekati Diamond - Northwest Territories	• Four impact and benefits agreements. • Agreement covers annual cash payment to communities, preferential employment of Aboriginal people, scholarship funds, preferential business opportunities for Aboriginals and environmental protection. • Employment of Aboriginals target – 31% in 2017. • Target of 70% spending on goods and services provided by Aboriginals and northern owned businesses. • 33% employment of Aboriginals

	• 78% procurement spending achieved in 2006. • Financial and in-kind support to local communities in areas of youth development, community arts and cultural activities as well as safety and environmental projects. • Decent staff accommodation.
Orca Sand and Gravel Project – British Columbia	• Impacts and benefit agreement, and cooperation agreement. • Aboriginals owned 12% shareholding at the start of the project. Funding contributions supported development of the project. • Aboriginals borrowed more than \$6 million from Polaris Mineral Corporation company in order to develop the community and acquire assets. Loan repaid with Aboriginals' share of the profits derived from the project. • Target of recruiting at least 50% locals for available jobs at all levels of the operation.

	• Creation of numerous community funds that will be financed by a \$0.09 per tonne royalty.
Vale Inco - Newfoundland and Labrador	• Impact and benefits Agreements detailing employment and training, and businesses. • 54% of workforce Aboriginals. • Vale Inco encouraged the establishment of local businesses to support supply of services and goods to the mine.
Raglan Mine - Quebec	• Profit-sharing measures and trust fund payments • Guarantees preferential hiring locals and contracting to locals' (Inuit) businesses. • Education fund for tertiary mining related careers. • Training programs. • 16% employment of locals.

The case studies highlight some of the interventions on how Canada, through provincial governments, uses natural resources to contribute to socio-economic

development. The majority of the interventions are fairly similar to what South Africa's Mining Charter advocates for. The employment of locals, trickle flow of economic benefits in the form of profit sharing, business partnerships and enterprise development, shareholding by locals, procurement of goods and services from locals and et cetera are important aspects of the IBA's. What is different though, is that there appears to be no national level framework that mining companies are expected to comply with. It is more about what mining companies and communities and government agree on. According to Natural Resources Canada (2013), these agreements have proven to be successful in securing benefits for some of the Aboriginal people and certainly for mining and exploration companies.

4.4.2 Australia

Australia is a federation and consists of six states (South Australia, New South Wales, Queensland, Victoria, Western Australia and Tasmania) and two internal territories, the Northern Territory and Australian Capital Territory. Mining activities occur in all of the states except the Australian Capital Territory state where there are only quarries for construction materials (Geoscience Australia, 2023).

With regards to ownership of mineral resources, Australia's default legal position is that all titles to minerals are reserved and vested in the state or territory in which they are located. There is limited mining of private mineral resources. Where this occurs, it is on mining rights that were typically granted prior to 1900 (Gilbert and Tobin, 2023). The states governments are not directly involved in the exploitation of mineral resources, but fulfil the role of a grantor and regulator of mineral titles.

There are no restrictions in relation to mineral projects investments, subject to a formal approval process. There are also no requirements for ownership by citizens. The granting of mining rights in all the states is, however, subjected to Native Title notification and/or negotiation process. Native Title is legislation that recognises the interests and rights of Torres Strait Islander people and Aboriginals in land and waters according to their traditional laws and customs (Gilbert and Tobin, 2023).

With regards to community engagements and mining projects, mining companies are expected to comply with the Aboriginal Cultural Heritage Act 2021. This Act governs the protection of Aboriginal cultural sites wherein no one, knowingly so, is allowed to temper with such site. Apart from this legislation, prior and informed community consultations are not mandatory under Australian law. However, community engagements are globally recognised as one of the mining industry's best practices, particularly in securing the "social licence" to operate. Community consultations can help facilitate favourable and quick planning and environmental approvals (Gilbert and Tobin, 2023). Lack of community engagements often leads to protests and disruptions of mining activities, as witnessed in multiple mining jurisdictions across the world.

For context on the added economic value by mining in Australia; the industry contributed 10% towards the GDP in 2020 (Bravus Mining and Resources, 2021). Record export mining revenues to the tune of \$455 billion were generated in 2022-2023 Financial Year (FY), translating to 66% of all export revenue for the nation (Constable, 2023). The contribution of Australia's mining industry to communities and socio-economic development is substantial. These contributions include employment (which is characterised by above national average wages), significant procurement of high-value plant and materials and tax revenues (Bravus Mining and Resources,

2021). Royalties and tax revenues, in the form of services, flow through to people in the cities and in smaller communities in regional and remote areas (Bravus Mining and Resources, 2021).

Nearly 60 per cent of mining projects in Australia are located near Torres Strait Islander and Aboriginal communities (Bravus Mining and Resources, 2021). This translates to greater chances of employment and economic activity for these communities. In some regional towns, local infrastructure such as road maintenance, airports, sewerage systems and even kindergarten are operated by mining companies. There are also local purchasing and procurement strategies that are put in place by mining companies to boost local economic benefits (Bravus Mining and Resources, 2021).

4.4.3 Africa region

4.4.3.1 Ghana

The mineral resources in Ghana are regulated by the Minerals and Mining Act, 2006 (Act 703). The exclusive right to minerals is preserved for the State in trust for the people. The law applies equally to investors, both Ghanaians and foreigners alike, except on the provisions relating to small-scale mining and restricted mining rights reserved for Ghanaians. Foreign investors can participate in restricted mining rights if the value of the investment is not less than US\$10 million (Republic of Ghana, 2006).

Section 43 (1) of the Act provides for government participation and the clause states that “where a mineral right is for mining or exploitation, the Government shall acquire a 10% free carried interest in the rights and obligations of the mineral operations in

respect of which financial contribution shall not be paid by Government” (Republic of Ghana, 2006, p. 25).

Section 81 of the Act states that small-scale mining in Ghana is reserved for Ghanaians. The Act defines small-scale mining operation as a mining operation over an area of land in accordance with the number of blocks prescribed, with a block referring to 21 hectares (Republic of Ghana, 2006). Small-scale mining continues to contribute positively to the economy of Ghana. As an example, artisanal and small-scale mining gold production has risen from 2.2% in 1989 to 34% in 2012, translating to export revenues of some US\$5.6 billion in the latter year (Republic of Ghana, 2014). An estimate of 1 million people in Ghana are engaged in artisanal and small-scale mining (Republic of Ghana, 2014). This policy intervention of reserved small-scale mining certainly gives opportunities for socio-economic development to ordinary Ghanaians. It is also the Government’s view that small-scale mining can help foster the development of Ghanaian mining skills, entrepreneurial and capital.

To secure the maximum benefits from the mining sector and to add on socio-economic development, Ghana has identified the following policies, as per the Minerals and Mining Policy of 2014:

- On employment creation, the mining legislation requires mining companies to give preference to the employment of Ghanaians. Mining companies will be required to submit programmes for the recruitment as well as training of Ghanaians.
- On procurement of local services and goods, the mining legislation requires companies to give procurement preference to qualified Ghanaian companies.

- With regards to local infrastructure development, mining companies will be expected to provide the necessary infrastructure for mining developments. Such infrastructure developments usually have a wider public use.
- On community participation and rural transformation, the mining policy encourages mining companies to be involved and support community initiatives, particularly in areas of health care, education and water and sanitation. Such relationships are usually important in order to attain 'social license to operate' where the likelihood of protests and mining activity disruptions are minimised. The Government of Ghana also recognises the need to apportion some of the fiscal receipts in a manner which ensures equitable sharing of benefits. Twenty percent of mineral royalties received are channelled to an administratively operated fund, the Mineral Development Fund (MDF). Fifty percent of the MDF funds are meant for development projects in local communities affected by mining (Republic of Ghana, 2016).
- The Ghanaian Government support research and development in the mining sector. There are institutions such as the Geological Survey Department, which receives funding support from the MDF.
- In its 2014 Mineral Policy, the Ghanaian Government also acknowledges the need to remove obstacles to participation in the mining sector on the basis of gender or marital status.

4.4.3.2 Botswana

The primary mineral law in Botswana is the Mines and Minerals Act 17 of 1999. The Mineral Rights in Botswana are vested in the state. There are no restrictions on foreign ownership in as far as the law is concerned (Republic of Botswana, 1999). However, in terms of Botswana's mineral policy, the government may decide to impose

restrictions on certain strategic minerals (Republic of Botswana, 2022). This is the case with the diamond sector where the government holds a significant stake of 50% in Debswana, a joint venture operation with De Beers Diamond Mining Company.

Section 40 of the Mines and Minerals Act 17 gives the state an option to acquire up to 15% working interest participation in a proposed mine, upon the granting of the mining license (Republic of Botswana, 1999). In such a transaction, the Botswana Government will be treated like any other shareholder in terms of capital contributions and expenditures. In other words, there are no special conditions applicable to government as a shareholder. This provision however, does not apply to a licence to mine diamonds, wherein the extent and terms of government participation shall be agreed upon with the applicant (Republic of Botswana, 1999).

Botswana's Mine and Minerals Act does not have requirements regarding the mining sector participation by its citizens. However, Botswana Mineral Policy of 2022 alludes to the need to economically empower citizens, in harmony with the country's Citizen Economic Empowerment Policy. The policy statement in this context states that the Botswana Government will promote meaningful participation of citizens as investors, suppliers and service providers in the minerals sector. The objective is to significantly increase the level of citizen economic empowerment and participation in the minerals sector (Republic of Botswana, 2022). These emerging interventions for citizen economic empowerment are similar to some of the elements of South Africa's mining charter. The details on methods and terms of meaningful participation remain unclear.

The Botswana Government also aim to encourage and develop small-scale mining. One of the policy strategies is to develop legislative and regulatory framework for

small-scale mining (Republic of Botswana, 2022). Consistent with other countries such as Ghana and Zambia, small-scale mining permits could be restricted to Botswana citizens. This remains to be confirmed with future legislations.

4.4.3.3 Tanzania

The mining sector in Tanzania is regulated by the Mining Act, Chapter 123 as amended in 2019 (The Act). All mineral resources in Tanzania are the property of the United Republic and shall be vested in the President in trust of the People of Tanzania, as per Section 5 of the Act. Section 10 of the Mining Act deals with the principle of state participation in the extractive sector. Under this section, the Tanzanian Government shall have not less 16% non-dilutable free carried interest shares in the capital of a mining company. In addition to the free carried interest shares, the Government shall be entitled to acquire up to 50% of the shares of the mining company corresponding with the total tax expenditures incurred by the Government in favour of the mining company (The United Republic of Tanzania, 2019).

The mining sector in Tanzania accounted for roughly 70% of the country's GDP in 2020 (Galal, 2023). In 2021, Tanzania ranked number four with regards to gold production in Africa, after South Africa, Ghana and Sudan (Galal, 2023). Tanzania is also endowed in metallic minerals like iron ore, cobalt, nickel, copper and silver. Gemstones that occur in Tanzania include diamonds, ruby, garnets and tanzanite stones. Tanzanite stones are to date, only found in the Tanzania. During the same year of 2021, more than 310 000 Tanzanians were employed by the mining sector (Galal, 2023).

Subsection 102 (1) of the Mining Act makes provision for mining companies to give preference to goods which are produced in Tanzania and services which are rendered by local citizens and/or companies. Subsection 102 (2) states that where such goods are unavailable in Tanzania, the foreign supplying company shall enter into a joint venture with a local company to supply the goods. The minimum shareholding held by the local company shall not be less than 25%. Mining companies are also expected to submit to a mining commission a procurement plan for a period of at least five years (The United Republic of Tanzania, 2019).

Section 103 of the Mining Act requires mineral right holders to submit a detailed plan for recruitment and training of Tanzanians in accordance with approved local content plans. There are also requirements for training, knowledge and skills transfer to Tanzanians, as per Section 104 of the Act.

With regards to CSR initiatives, Section 105 of the Mining Act requires mineral right holders to compile, on annual basis, credible CSR plans. The plans must be jointly agreed by relevant local government in consultation with Ministers of finance and local government authorities. Such plans are to take into account social, economic, environmental and cultural activities based on local government authority priorities of host communities (The United Republic of Tanzania, 2019).

4.4.3.4 Democratic Republic of Congo

The Democratic Republic of Congo (DRC) is the largest producer of copper in Africa. The country is also the world's leader in cobalt production having contributed 73% of the total world's supply (Venditti, 2023). The mining industry in the DRC is regulated primarily by Law No 18/001 of 9 March 2018 (the "New Mining Code") which replaced the 2002 Mining Code.

Under the New Mining Code and for every awarded mining license, mining companies are required to transfer 10% free-carried and non-dilutable shares to the DRC government (Article 71-d). The state is also entitled to an additional 5% stake upon each renewal of a mining licence (Article 80 – h). An additional 10% of the mining share capital must be owned by a Congolese citizen (Article 71 bis) (HerbetSmithFreehills, 2018).

Article 242 of the New Mining Code make provision for 10% of royalty payments to be allocated to a sovereign mining fund. As of November 2022, discussions were still underway in improving the regulatory framework of the future fund decree, in order to ensure good governance (US Department of State, 2023). The fund is not yet declared.

With regards to local citizens economic developments, mining companies are obliged to spend at a minimum 0.3% of their annual turn-over on community development projects. The funds are to be managed by the mineral right owner and representatives of the community (Article 285). Mining rights holders are also expected to contribute towards projects to promote socio-economic and industrial development in affected communities (Article 285) (HerbetSmithFreehills, 2018). At the time that this research study was conducted, the set of specifications regarding socio-economic and industrial development could not be found in the public domain. Similar to South Africa's Mining Charter, the DRC acknowledges a need to have a set of measurable targets pertaining socio-economic development (HerbetSmithFreehills, 2018).

4.4.3.5 Zambia

The mining industry in Zambia is primarily regulated by the Mines and Minerals Development Act, No 11 of 2015 (MMDA). All rights of ownership of minerals located in the Republic vest in the President on behalf of the Republic (Republic of Zambia, 2015). With regards to mining licences, a prospecting permit, small-scale and artisanal mining licenses can only be granted to citizens of Zambia, or a company that is at a minimum of 50,1% owned by Zambians (sub-sections 29:2 and 29:3 of the MMDA). In the context of Zambia, small-scale mining means mining operations that cover an area of a minimum of three cadastre units and not exceeding one hundred and twenty cadastre units (Republic of Zambia, 2015).

Zambia does not have free-carry rights or options for the state to acquire shareholding. The state however, continues to hold minority shares in mines which it previously owned. Section 17 of the MMDA also provides for the Zambian Government to acquire mining rights over identified areas for investment purposes.

With regards to citizens empowerment, Section 20 of the MMDA requires that preference be given to Zambian products and services and contractors during the construction, installation and/or decommissioning of mining-related facilities. For large-scale mining, mining rights holders/applicants must make an undertaking for the employment and training of qualified and skilled local Zambians.

There are no social responsibility requirements under the applicable law or regulations. Social responsibility is a matter of corporate governance of mining companies (ICLG.com, 2023). Sub-section 4 (b) of the MMDA states that Zambia's mineral resource shall be explored and developed in a manner that promotes and

contributes to socio-economic development. There are no specific requirements on targets which needs to be met.

The minerals policy of Zambia, The Minerals Resources Development Policy of 2013, alludes to citizen economic empowerment in the mining sector. The objectives of the policy include promoting Zambian ownership in large-scale mines and reserving certain categories of mining rights and minerals to Zambians. The policy also alludes to reserving a portion of the mineral royalty for the development of businesses in mining communities. Mining companies are encouraged to float their shares on the Lusaka Stock Exchange (Republic of Zambia, 2013). According to the applicable MMDA 2015, it is only the reserving of small-scale and artisanal mining to Zambians which was passed to law. The other policy objectives are yet to be passed into law.

Zambia is Africa's second largest copper producer after the DRC. The country was the world's seven largest copper producer in 2018 and holds 6% of the world's known copper reserves (Zambia Development Agency, 2023). Cobalt and emerald gemstones are other key commodities in Zambia. Both copper and cobalt account for well over 70% of Zambia's foreign earnings (Zambia Development Agency, 2023). Zambia is also endowed in other gemstones, lead, zinc, silver and gold, although not on a large scale. The full potential of metallic resources is yet to be realised, creating greater opportunities for exploration (KPMG International, 2013).

Employment and source of income are the key ways in which mining contributes to socio-economic development. The majority of mining goods and services used in Zambia's mining industry are imported (Zambia Development Agency, 2023). Manufacturing and sourcing of local goods could be considered as a strategy to further enhance the contribution of mining to socio-economic development.

4.4.4 Brazil

The mining industry in Brazil regulated by Decree-Law No.227 of February 28, 1967. Mineral resources are the property of the Brazilian Federal Government. There are no restrictions on foreign ownership of exploration or mining rights, as long as the entity is registered as a Brazilian company. There are no requirements for ownership by local citizens. The State of Brazil does not have free carry rights or options to acquire shareholding (ICLG.com, 2023).

In 2022, Brazil signed Decree 11.108 to establish a national mineral policy and to create a Mineral Policy National Council. Amongst numerous principles, the Brazilian Mineral Policy of 2022 alludes to the rational use of mineral resources and with the maximisation of socio-economic benefits. A National Mine Plan and a Goals and Actions Plan will be used as instruments through which to introduce the Mineral Policy (IEA, 2022).

Under the applicable mining law, there are social responsibility requirements only for mine closures. Examples of these obligations include social development investments and employment and training of employees during and after mine closure (ICLG.com, 2023).

Brazil is ranked as the second largest producer of iron ore in the world. It is also the world's leading producer of niobium. The mining sector contributed 2.4% to Brazil's GDP in 2019. In 2020, Brazil was ranked number six in terms of mineral production value which stood at 38.3 billion US dollars (Statista, 2023). Mineral royalties derived from mining operations are distributed to three organs of the state; i.e. the Brazilian state, provinces and municipalities. The municipalities royalties are particularly meant

for human development in communities that are most affected by mining operations (Bnamericas, 2023). Mining employment, wages, mineral royalties' income are some of the ways that mining contributes to socio-economic development in Brazil.

4.4.5 Chile

The state of Chile has absolute, exclusive and unalienable ownership of all mineral resources (Government of Chile, 1983). There are no restrictions on foreign investment and ownership of mining concessions for metallic and non-metallic resources. There are however certain substances, such as surface clays, that may be restricted to the owner of the land (Association of Corporate Counsel, 2014). The lands that are located close to international borders may also be restricted to the owner of the land (Dentons, 2023).

In addition to its role of a grantor and regulator of mineral rights, the Chilean state owns and operates the Codelco mining company. Codelco is dubbed the company of all Chileans. It operates seven copper mines, a smelter and a refinery. The total copper sales reached US\$20.023 million in 2021 (Codelco, 2023). Chile is the world's leader in copper production, having produced 5.2 million tons of the metal in 2022 and representing 24% of total world production. For 2020, the country was ranked fifth in the world in terms of mineral production value (Statista, 2023).

Community involvement in Chile is considered in mining projects when there are environmental concerns. Chile has the Mining and Society Department under the Ministry of Mining. The department encourages relationships between mining companies, local communities and non-governmental organisations. The department also promotes education and training opportunities for local residents. Communication

of policies and/or good social practices associated with mining operations is through the same department (Dentons, 2023).

In Chile, there is no obligation to request a prior and informed citizens consultation except when there are communities in the vicinity of the mining projects. Consultation processes are carried out when there are large investment projects that require environmental evaluation (Dentons, 2023).

Chile has been praised as a success story of mining-based economic development and entrepreneurial achievements. There are no regulatory obligations concerning socio-economic developments. The expansion of the mining industry has seen poverty levels decrease from 40.5% in 1990 to 8% in 2015. This is attributed to increased mining employment that offers higher wages than national average and resulting in improved quality of life. In mining regions, the industry accounts for more than 63% of the regional GDP (International Copper Association, 2018).

4.4.6 Summary and discussion of the qualitative description of mineral codes and policies

The qualitative descriptive study indicated that the majority of requirements of the Mining Charter are in alignment with other international interventions on socio-economic developments supported by mineral wealth. Table 4.3 depicts a summary of this study. For the sake of this research report, the elements of the Mining Charter were used as a blue-print of socio-economic interventions (first column of table 4.3). It is not suggested that these elements cover the full-spectrum of socio-economic interventions but were found to be comprehensive enough to be used as a blue-print. The symbol ✓ in the table depicts mining-related socio-economic interventions similar

to those in South Africa and are applicable under the said mining jurisdiction's mining policy and/or mining code. The symbol ✖ depicts that on contrary to South Africa, the said mining jurisdiction does not enforce the socio-economic intervention through mining policy and/or mining code.

Table 4.3: Mining-related socio-economic development initiatives in selected mining jurisdictions.

South Africa Mining Charter III (2018) Elements	Canada	Australia	Ghana	Botswana	Tanzania	DRC	Zambia	Brazil	Chile
Ownership of mining companies by citizens	✓ limited sharing-holding/profit sharing for the benefit of the community & as per the IBA's	✗	✗ Small-scale & artisanal mining limited to Ghanaians	✗ Policy objective to promote participation of citizens as investors	✗	✓ 10% of share capital	✗ Small-scale & artisanal mining limited to Zambians. There's a policy objective to promote Zambian ownership in large-scale mines	✗	✗
State participation (Alternative to ownership of mining companies by citizens)	a minimum of 51% Canadian ownership is required for all uranium mineral properties.	✗	✓ 10% free carried interest in all mining operations	✓ In strategic diamond mining	✓ 16% free carried interest, Possibility of additional 50% corresponding with tax expenditures	✓ 10% of share capital, additional 5% upon mineral right renewal	✓ Retained "golden shares" post privatisation	✗	✓ Through state-owned entity Codelco
Procurement	✓	✓	✓	✓	✓	✗	✓	✗	✗

	Neither law or policy but practised by companies	Neither law or policy but practised by companies	In policy	In policy	Preference to be given to Tanzanian goods & services, 5-year plans to be submitted		Preference to be given to Zambian goods & services		
Employment Equity	✓ As per the IBA's	✗	✓ Preference to be given to Ghanaians	✗	✓ Recruitment and training of Tanzanians	✗	✓ Preference to be given to qualified Zambians	✗	✗
Mine Community Development	✓ As per the IBA's	✓ Neither law or policy but supported by companies	✓	✗	✓ Through credible CSR plans	✓ 0.3% of a mining company's annual turnover	✗ At the discretion of mining companies through CSR	✓ Applicable during & after mine closure	✗
Housing and Living Conditions (of mine workers)	✓ As per the IBA's	✗	✗	✗	✗	✗	✗	✗	✗
Human Resource Development	✓ As per the IBA's	✗	✓	✗	✓	✗	✓ Training of Zambians	✓ municipality royalties	✓

The Mining Charter in itself is rather unique in that its requirements are in a form of measurable targets. This is commendable as compliance can be measured, evaluated and monitored. The alignment in socio-economic interventions is particularly true in the aspects of mining community developments, procurement of services and goods and human resources development. Housing and living conditions are not strictly addressed by law or policy in any of the assessed countries. In Canada, a similar intervention with respect to housing and living conditions is through IBA' between mining companies and affected employees.

With regards to the ownership of mineral projects/companies and of the 10 countries assessed including South Africa, only the DRC has an enforcement requirement of a 10% share capital held by Congolese citizens. The observed Canada's shareholding by its citizens is in the form of communities only as beneficiaries and not individuals or a small group of investors. The requirement of ownership of mining companies by local people is more restricted to South Africa, besides the DRC. Benchmarked particularly against other African countries, South Africa is different, but not unique, in that there is no legal requirement for the state to have direct interests in the exploitation of its mineral resources.

In concluding the qualitative descriptive study on various mining codes and mining policies, the observation made on the ownership of mining companies by citizens was particularly important for this research study as this finding linked to the problem statement of the research study wherein the ownership element of the Mining Charter is reportedly one of the main hindrances to mining investments in South Africa, as singled out by some of the mining executives.

4.5 Chapter Summary

Chapter 4 assessed the mineral codes and mining policies of 10 mining jurisdictions. The majority of requirements of the Mining Charter are in alignment with other international interventions. The Mining Charter in itself is rather unique in that its requirements are measurable targets. Based on the case studies, the requirement of ownership of mining companies by citizens is restricted to South Africa and the DRC. In Canada, there is limited sharing-holding/profit sharing for the benefit of the community where there is an agreement in place between the mining company and the community. Agreements are not enforced by law or mining policy. The federal government of Canada has direct regulatory influence only on Uranium wherein a minimum of 51% Canadian ownership is required for all uranium mineral properties.

5 CONCLUSION(S) AND RECOMMENDATIONS

5.1 Chapter Overview

This chapter gives an overview of the structure of the thesis with statements of what each chapter has covered, and the research findings thereof. Recommendations are given and research observations, contributions and limitations are also highlighted. The chapter further gives recommendations for future research work.

5.2 Discussions and research observations

This research report has presented five chapters, which covered the following: The introduction to the research study in chapter 1 and literature review studies in chapter 2. The third chapter addressed the methodology and types of analysis that the research followed. Analysis and discussion of results were described in Chapter 4. The last chapter looked at the research findings, conclusions made and recommendations going forward.

The purpose of this study was to review the impact of the Mining Charter on socio-economic development and mining investment attractiveness in South Africa. The research study was motivated by the importance of government mineral policy on a country's mining competitiveness. It was additionally motivated by the emphasis that the South African Government put on the need to transform the mining industry as one of the measures to redress injustices which were perpetuated by past laws. Reiterations of the Mining Charter document and court battles between the DMR and the MCSA suggested uncertainty concerning the administration, interpretation and enforcement of the charter.

The approaches of the research study were as follows.

- The impact of the Mining Charter on socio-economic development was assessed by reviewing government compliance reports and MCSA publications.
- With regards to mining investment attractiveness analysis, the research took into consideration the top 20 mining countries in terms of global exploration budget share. The countries together constituted 86.80% of global exploration budget in 2022. Ratio analysis of the percentage of exploration spending as a percentage of GDP was conducted. A comparison of the exploration budget as a percentage of GDP normalises the comparison as it takes out the influence of the size of a country's economy.
- The exploration budget data was sourced from S&P Global Market Intelligence (2023). The GDP figures were sourced from The World Bank (2023). The 2022 data was used as it was the latest available, particularly the GDP figures. The data used is shown in Appendix A, Table A-3 of this paper. The data was retrieved during November and December months of 2023. Microsoft Excel tools were used for the analysis. The information for trend analysis of global exploration budget was also sourced from S&P Global Market Intelligence (2023).
- A qualitative description was conducted on 10 mining jurisdictions including South Africa (the Mining Charter), Canada, Australia, Brazil, Chile, Botswana, Zambia, Tanzania, DRC and Ghana. This choice of method of study was useful for understanding the differences and similarities between the Mining Charter and other global socio-economic interventions supported by natural resources.

The mining codes and mineral policies of each of the countries were retrieved from internet sources. The information was gathered mainly during the course of 2023.

The main research observations of this study are as follows:

From the literature review point of view, it was found that mining-related corporate social responsibility activity in South Africa has shifted from discretionary to a matter of regulatory compliance as observed by Corrigan (2019). This research report acknowledges that the Mining Charter has been ruled to be a policy document.

Based on the results of the independent study conducted by the MCSA, it can be deduced with that the Mining Charter is having a positive impact on socio-economic development in South Africa. The MSCA study was conducted four years after the DMR released its Mining Charter impact assessment report in 2015. In that report, the DMR concluded that the Mining Charter had been in existence for more than a decade, however, it was observed that there was still a long way for the sector to be fully transformed and compliant. With the MCSA report painting a now positive picture, there needs to be alignment in how the mining industry and the department of mineral resources measure compliance with the charter.

With regards to mining investment attractiveness, South Africa ranks relatively low in its exploration expenditure in terms of both absolute spend and percentage of exploration spend to GDP. When considering the percentage of exploration expenditure relative to GDP, South Africa is ranking low even when compared to other developing countries and some mining jurisdictions in Africa such as the DRC, Mali,

Cote d'Ivoire and Ghana. This may reflect less attractiveness of the South African industry to investors who choose to invest in other countries. While it is true that South Africa's exploration budgets are lower than most developing mining countries, the trends indicate that the country's spending coincide with global exploration budget trends, which in turn coincides with global major events.

The research observations on the qualitative description of the mineral codes and mining policies of selected mining jurisdictions were that majority of requirements of the Mining Charter are in alignment with other international interventions. The Mining Charter in itself is rather unique in that its requirements are measurable targets. Based on the case studies, the requirement of ownership of mining companies by citizens is restricted to South Africa and the DRC. In Canada, there is limited sharing-holding/profit sharing for the benefit of the community where there is an agreement in place between the mining company and the community. Agreements are not enforced by law or mining policy. The federal government of Canada also has direct regulatory influence only on Uranium wherein a minimum of 51% Canadian ownership is required for all uranium mineral properties.

The observation made on the requirement of ownership of mining companies by citizens, specifically black people in South Africa, is particularly important for this research study. This finding links to the problem statement of the study wherein the ownership element of the Mining Charter is reportedly one of the main hindrances to mining investments in South Africa, as singled out by some of the mining executives.

The mining industry is an international business which require huge capital injection and has long lead times in terms of return on investment. National mining policies

communicate government's position with regards to how its natural resources need to be governed. The conundrum is for governments to be able to strike a balance between competitive mining policies and economic benefits which could be derived from the exploitation of its mineral resources.

5.3 Recommendations

The issue raised by the MCSA that there is no standardised score-card against which to measure compliance with the 2018 charter is concerning and needs to be addressed. As long as there are discrepancies with the reporting and analysis of compliance data, it would be difficult to get the real answer on transformation of the industry.

The low exploration spend raises concerns of a mining industry which is contracting rather than expanding in the long term. Some interventions which could be put in place to attract more investment into mining can include policy certainty and/or investor friendly legislation.

South Africa can learn from Botswana where shareholders in empowerment deals are treated like any other shareholder in terms of contributions and participation. South Africa has another option to consider citizen empowerment options which would be in line with other mining jurisdictions particularly in Africa. Direct state participation could be considered as an alternate form of ownership of mining companies by citizens.

5.4 Research Limitations

Most mining companies do not exclusively report on ownership structures in the annual integrated reports. It was not easy to derive such information. An alternative source of the data was the DMR, however it was impossible to access the data. The results of an independent study conducted by the MCSA were used for discussions on compliance with the Mining Charter by mining companies.

The exploration budget figures retrieved from S&P Global Market Intelligence (2023) excluded exploration spending on coal, iron ore, aluminium, oil and gas and many other industrial minerals

5.5 Recommendations for Future Research Work

Based on the Mining Charter compliance results stipulated in the 2019 MCSA report, it is fair to state that BEE empowerment deals have created value for designated beneficiaries. However, as this form of citizen empowerment is one of the factors which is reported to deter mining investments, it becomes imperative to understand the magnitude of benefits of BEE deals in their current form and the opportunity cost to deterred investments.

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APPENDIX A

Table A-1: Literature review articles summary on mining-related socio-economic development in South Africa

Author & Year	Method of study	Summary of the paper
Diale (2014)	Assessment of secondary data	The article references the data contained in the 2009 Mining Charter impact assessment report by the DMR. The conclusion made was that the mining industry's compliance on the Mining Charter remains disappointingly low. The article further postulates that evidence suggests that most mining companies embrace the provisions of the Mining Charter for convenience and compliance.
Moraka (2015)	Literature synthesis	The article, through literature synthesis, identifies the barriers experienced by mining companies in complying with the Mining Charter. It analyses the progress made by companies in adhering to the requirements of the Mining Charter, since its inception up until 2014, based on the Impact Assessment Report as released by the DMR. The article concludes that there is transformation progress by mining companies and recommends that mining licenses of non-compliant mining companies should be revoked.
Corrigan (2019)	Field-based interviews	The research analysed the process of compliance with South Africa's mining regulation and stakeholders that are formally involved or marginalised by the process. The study found out that there remain challenges in ensuring that the regulations linked to mining company activities yield local social benefits that are effective and impactful. According to the article, the introduction of the Mining Charter has increased entry points for government's participation in the exploitation of the country's mineral resources, and social spending by companies has increased. The article further states that the same regulation has failed to put in place effective monitoring systems and process transparency. The study concludes that the formal role of mining communities is not fully incorporated into the regulatory process.

Maponga & Musa (2021)	Case studies method	This study found that increasing the local content of mining projects enhances local skills and builds industrial capacity, which then feeds into socio-economic development and growth. A dedicated institutional framework that will include a monitoring and evaluation mechanism, where there will be penalties for non-compliance and incentives for compliance is recommended. Furthermore, a harmonised SADC region approach to local content requirements is proposed for the benefits of the concept to be widely spread.
Atal (2017)	Interviews	The article highlights that different mining stakeholders have different views on the kind of transformation they are hoping for. This should not necessarily be a surprise as different stakeholders will have different expectations, based on how they are affected. Following interviews conducted with some of the government officials, Atal (2017) believes that government accepts the legitimacy of mining companies as governors and as political authorities in the transformation processes. The author concludes that the transformation process chose not to eradicate white-owned companies, but instead tamed such companies through social obligations. And as a result, the positions of mining companies are strengthened against reform in post-apartheid South Africa.
Mwana & Bowman (2021)	Multi-scalar analysis	The study analysed mine-community conflicts in the rural platinum-rich belt in South Africa and concluded that the main conflicts between local elites such as chiefs and traditional councils and local residents are rooted in the demands for exclusive control of the land and mineral rents. The local elites control the mineral rents which exacerbates inequality. It concluded that the current regulations developed to address inequality and enforce transformation are not effective.

Table A-2: Listed South African mining companies and BEE ownership (Companies Integrated Annual Reports, Sustainability Reports, 2019,2020,2021,2022)

	Company name	Target 26%	2019	2020	2021	2022	Comments
1	Goldfields		35	35	35	35	
3	Sibanye-Stillwater		26	26	26	26	
4	Harmony		30	30	30	56	
5	Kumba		29,79	34	32,6	32,6	
6	Exxaro		30	38,22	47,1	47,1	
7	ARM		N/R	N/R	N/R	N/R	diversified company, reporting is per asset, no single figure to use
8	Impala		N/R	N/R	N/R	N/R	not clearly reported
9	Implats		N/R	N/R	N/R	N/R	not clearly reported
10	Northam		31.4	31.4	31.4	31.4	
11	Pan African Resources		26	26	26	26	
12	Thungela Resources		N/A	N/A	10	10	
13	Glencore		N/R	N/R	N/R	N/R	
14	Wesizwe Platinum		6	6	6	6	
15	MC Mining		26	26	26	26	
16	Merafe Resources		20,5	20,5	20,5	20,5	
17	Randgold & Exploration		N/A	N/A	N/A	N/A	Exempted micro-enterprise
18	South 32		N/R	N/R	N/R	N/R	
19	Tharisa		26	26	26	26	Once empowered, always empowered principle
20	Sable Exploration & Mining		N/R	N/R	N/R	N/R	
21	DRD Gold		N/A	N/A	N/A	N/A	Exempted micro-enterprise
						Legend	
						N/R	not reported
						N/A	not applicable

Table A-3: GDP's and exploration spending of top 20 mining countries, for 2022 (S&P Global Market Intelligence, 2023 and The World Bank (2023)

Country/Region	Country Budget (\$M)	Country GDP (\$M)	Country Budget as a % of GDP	Global Budget Share (%)
South Africa	104,1	405270	0,026	0,79
Canada	2 680,7	2140000	0,125	20,47
Australia	2 326,2	1690000	0,138	17,76
USA	1 595,9	25440000	0,006	12,19
Chile	713,2	301020	0,237	5,45
Mexico	633,4	1470000	0,043	4,84
Peru	533,0	242630	0,220	4,07
China	403,9	17960000	0,002	3,08
Argentina	391,5	631130	0,062	2,99
Brazil	374,1	1920000	0,019	2,86
Russia	359,4	2240000	0,016	2,74
Ecuador	280,3	115050	0,244	2,14
Mali	153,9	18830	0,817	1,18
Dem. Rep. Congo	132,8	15820	0,839	1,01
Colombia	131,6	343620	0,038	1,00
Indonesia	127,5	1320000	0,010	0,97
Ghana	116,1	73770	0,157	0,89
Côte d'Ivoire	110,6	70020	0,158	0,84
Tanzania	103,4	75730	0,137	0,79
Finland	96,5	282900	0,034	0,74
Others				
Global¹	13 096,4			100,00